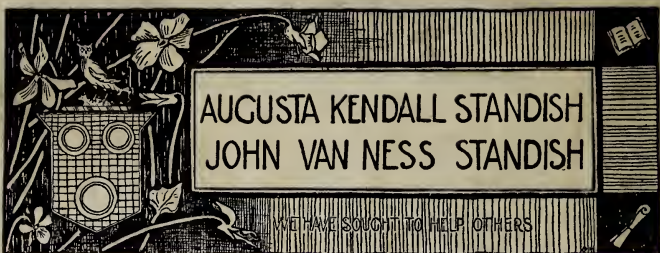


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P R E F A C E .

The Graded Course of Instruction, prepared by W. H. WELLS, Esq., has been in successful use for about five years. It has been once or twice modified, and as the supply of copies had become exhausted, it was thought advisable to revise it before the publication of a new issue. The work of revision has required nearly a year's labor, and produces, after all, but very slight modifications except in the oral course, and in this it is more a work of re-arrangement than of change. The excellent general directions of Mr. WELLS have been retained so far as they are found applicable to the course as modified. Much credit is due also to the Teachers of the different grades of the several schools for their timely suggestions, the results of their experience, and especially to the Principals of the District schools, and to the Principal of the High School, and to the Teachers of the Normal and Model schools, for their valuable aid. It is presented to the teachers for their guidance, with the belief that it is yet imperfect, but with the hope that in their hands its errors may be so corrected as to make it subserve the good of the schools and the advancement of sound learning.

The subjects of study embraced in the course are fixed by the Board of Education, and promotions from Grade to Grade will depend upon the mastery of these subjects.

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But the general directions accompanying the course are rather suggestions than positive precepts. It is not supposed that all teachers will pursue with equal success any prescribed methods of instruction. Each must work in his own way, while all labor for the accomplishment of the same end. The suggestions made as to methods are the result of the experience of many individuals, and may be safely adopted by many others, and yet in some particulars a better way may be found. All are encouraged to find that better way, or to pursue it if already found. That way is best for each, by which he may soonest attain the end sought—thorough scholarship and complete manhood.

In the Appendix will be found a list of the Text Books used, and the portions of each allotted to each grade.

GENERAL DIRECTIONS FOR ALL THE GRADES.

§ 1. READING.

Every good reader aims first to comprehend the thoughts of the author he reads, and then to convey to others an intelligible idea of the author's meaning. The training of the pupil in reading, therefore, involves two distinct and yet inseparable kinds of instruction. Mental discipline and vocal discipline must be carried along together. Thought and its expression must be considered at one and the same time. *Some* thought may be expressed by any sort of utterance, but *the* thought of the author requires vocal organs under complete subjection to the understanding. To read well, one must know what he is reading, and must have such complete mastery of his vocal organs as to make them faithful servants ready to do his bidding without mistake of any kind. No dull, listless, unthinking scholar can ever become a good reader. The teacher's first work is to awaken thought. Something the child can understand should be selected as a reading lesson. It is not necessary that the lesson selected be one already understood; it should be one in advance of the child's present ability, but within the reach of his comprehension. We oftener underrate than overrate the *ability* of pupils, while the reverse is true as regards their actual *growth* or *progress*.

Children who become expert in the utterance of sentences that contain no thought make no mental progress. There must be obstacles thrown in the child's path, or he will gain no strength. If all be leveled and smoothed for him, his monotonous style of reading is but the outgrowth of an inactive, sluggish mind. The teacher should bring the pupil into the face of the difficulties in his lesson, and encourage him to battle, rallying him again and again, if need be, to the contest, until victory crowns his efforts.

To test the accuracy of the child's knowledge of what he reads, he should be encouraged to read sentences, substituting for some selected words, words of his own choosing, that shall change the form but not the meaning of the passage. This exercise may embrace at first but a single word in each sentence, and then may be extended as the capacity of the pupil may seem to warrant, until nearly or quite all the words are changed. In the more advanced classes, poetical selections may be changed into prose. While the definitions given by the author should not be neglected, the child should be encouraged as far as possible to give definitions of his own, and should be permitted, as indicated above, to put his definitions into the place of the words defined, and then to read the sentences he has changed. This test may be still further extended by requiring the pupil to embody the selected words in sentences of his own construction.

If the teacher finds difficulty in securing proper expression in any particular case, the remedy may be found in asking a question, the proper answer to which would be the difficult passage, and in requiring the pupil to give the passage as an answer to the question asked.

The voice of the teacher should be frequently heard in every reading exercise, as an example for the scholars to imitate. If any teachers are conscious of imperfect articulation or expression, they should seek every means of correction within their reach.

There are those who have superior ability and success as teachers of reading, whose methods and whose experience may be made available by those of less experience or less success. In this branch more than in any other, models may be safely followed. Teachers may learn, as their pupils must learn, by imitating good models. Mere repetition of a badly read sentence does no good, unless the fault be distinctly marked out, and the correct reading be given by the teacher, or by some member of the class who has mastered the difficulty. Good readers in a class may be permitted to give the model. This course often secures the desired result sooner than any other.

Too much concert reading leads to the formation of bad

habits, and to the cultivation of unnatural tones of voice. The forward raise their voices to an unnatural key lest their superior reading should not be heard, while the diffident and distrustful drop their voices into a lower than natural key, lest they should make some mistake and mar the general effect, and the lazy move their lips that they may appear to read, while not a sound escapes their moving lips. Concert reading should not be discarded, but should be carried just so far as it can be done without encouraging monotonous and measured reading. Short sentences are much better for concert practice than long ones, since they do not require measured divisions. Every teacher should make strenuous effort to secure good reading of a whole class in concert, but should check such reading the instant it falls into measured monotone, or develops in any pupil unnatural tones of voice. The advantages of concert reading will not pay for a single bad habit formed by its careless use. The attention of the class may be kept by other methods, one of which is of importance in other recitations as well,—that is calling upon scholars out of their regular order of standing or sitting, and if need be, calling upon the same person two or three times, until the impression that he will be called on but once is entirely dissipated. Answers to general questions connected with reading lessons may be given in concert. The enunciation of elemental sounds may also be given in concert. Poetical selections, which are already measured, may be read in concert with less difficulty and with less danger than prose.

While a class is engaged in reading, the undivided attention of the teacher should be given to it. If the attention of the teacher be called away necessarily, the exercise should be suspended.

Children should be encouraged to criticise each other fairly and justly. Raising the hand during the progress of the reading should not be allowed, but at its close those who have noticed errors should have an opportunity of correcting them, provided always that the critic can illustrate his own criticism. This should be occasionally tested.

An excellent teacher gives as the result of her experience

this important caution, "Children must be taught to open their mouths before they can become good readers." The importance and value of this suggestion are fully confirmed by the experience of all good teachers, and this introduces also the important topic of distinct articulation.

Frequent exercises, varied according to the advancement of pupils, in the utterance of elementary sounds, single and combined, should be most faithfully attended to. This may be more fully treated under the instructions with reference to the several grades. While good articulation is not the *end* of reading, it is an essential *means*, and one without which the true end—expression of thought—can never be attained.

There is no fault more common in reading than that of stumbling, hesitating, catching and repeating. It is but one fault and teachers should use every effort to break it up. The moment the child shows the first symptoms, his case should be carefully but immediately considered, and strict attention at once given to its cure. It sometimes arises from the child's vocal organs getting the start of his thoughts, and should be cured by a little hard study, until the pupil becomes familiar enough with the thought to have his mind keep ahead of his voice. It sometimes arises from pure carelessness and its cure needs no mention. It often arises from the use of books in advance of the child's capacity, so that reading becomes mere utterance without so much as a thought creeping in even behind a word uttered. The case suggests its own remedy. It sometimes arises from indulgence in a similar habit in all other recitations.

Whatever its cause, its cure must be certain, or no progress is made, but on the other hand constant retrogression.

§ 2. SPELLING.

In conducting oral exercises in spelling, pupils should pronounce each word distinctly before spelling it, and they should never be allowed to try twice on a word. Whenever a pupil misses a word, let him afterwards be required to spell it correctly. This may be done as soon as the correction is made in the class, or deferred till the close of the recitation.

An excellent plan is for the teacher to pay no apparent attention to the misspelling, but pronounce the next word in order, and so on until some pupil who has noticed the error, spells the misspelled word instead of the one pronounced for him by the teacher, and for this correction he should receive some credit, either by going above all whom the word has passed and the one who first misspelled it, or by changing places with the one who committed the error, or if no change of place be allowed, by some mark of credit. The teacher should in all cases keep track of the misspelled words and see that they are not entirely passed over. In all cases of a misspelled word under this practice, each pupil who has allowed the word to pass him should be required to spell it correctly before the recitation closes, if there be time, if not, at the next recitation.

In giving out the words to a class, teachers sometimes commit the error of departing from the ordinary pronunciation, for the sake of indicating the orthography. Thus in the word *variance*, the vowel in the second syllable is given very distinctly as long *i*, to show that the letter is *i* and not *e*. The words should in all cases be pronounced according to the standard dictionary used in the schools.

As pupils are constantly liable to misunderstand the pronunciation of words, it is a very useful practice, in all written exercises, to call on some pupil in the back part of the room to re-pronounce each word distinctly, as soon as it is pronounced by the teacher.

Special attention should be given to syllabication, in connection with oral spelling. Pupils should syllabicate in all cases, as in the following example: *a-m am, p-l-i pli, ampli, f-y fy, amplify*. Nor should there be the least deviation from this rule in cases where the syllable contains but a single letter, as in *element—e-l el, e e, ele, m-e-n-t ment, element*. The reason for this will be specially apparent in words in which the sound of the syllable is not the same as the sound of the name of the letter.

Syllabication in written spelling has but one use, that of determining the place of division of words when a word occu-

pies parts of two lines. With present practice this is of such rare occurrence that it does not compensate for the time spent in syllabication, nor does it warrant the unnatural appearance of words so divided. Besides, any person having learned syllabication in connection with oral spelling need never make mistakes in writing, where the necessity of dividing words arises.

Teachers should bear constantly in mind, that unless habits of correct spelling are formed early, there is very little probability that they will ever be acquired.

However thorough the drill in spelling may be, from the lessons of the speller and reader, every teacher should have frequent and copious exercises in spelling words from other sources. These should be words in common use, chosen, as far as possible, from the range of the pupil's observation, including the new words that arise in object lessons, and in geography, arithmetic, grammar, etc. The more difficult of these words should be written in columns on the blackboard, and studied and reviewed with the same care as lessons from the speller and reader. Failures in spelling these words should be marked with errors, the same as failures in any other lessons.

Teachers should put forth their best efforts, especially in primary classes, to secure the attention of the pupils, and render the lessons as interesting as possible. Occasional exercises in "choosing sides," when properly conducted, may be made highly useful. The exercise of "spelling down" a class may be resorted to occasionally with good effect.

If a teacher finds at any time, while conducting an oral exercise in spelling, that a portion of his class are becoming listless, he can easily recall their attention by the following simple measure: The whole class pronounces distinctly the word given by the teacher, as *notation*; then one scholar says *n*; the next *o*; the next pronounces the syllable *no*; the next says *t*; the next *a*; the next *ta*; the next *nota*; the next *t*; the next *i*; the next *o*; the next *n*; the next *tion*; then the whole class pronounce the word *notation*.

Another useful method is to read a sentence of reasonable

length, and require the members of a class to spell the words in order; the first scholar spelling the first word, the next scholar the second, and so on to the end.

Pupils may be allowed to select words for each other's spelling, confining them to the last lesson in geography, arithmetic, history or grammar. The first in the class pronounces a word for the second to spell, and the second for the third, and so on, the last pronouncing a word for the first. The scholar who fails to pronounce his word properly, or to spell correctly the word given him should take his seat at once, and the one standing longest on the floor be declared the victor.

No exercise can be more frequently varied than this with profit to the pupil.

In all written exercises the spelling should be carefully scrutinized, and the misspelled words given to the pupil or the class at the next exercise in written spelling. First make sure that pupils can spell correctly the words they have occasion to use, and after that words they may never use, if there be time. In written spelling it is better that the misspelled word should be re-written correctly and in such a position that the false and true spelling may be seen at a glance.

In spelling, teachers should avoid the use of any unnatural tones of voice, and should pronounce the words as they would read them if they were reading aloud. This will secure the attention of the scholars better than it can be done by any other method.

§ 3. MENTAL ARITHMETIC.

In all the grades where a text-book on this subject is used, teachers should make up many exercises similar in principle to those of the book, so that principles may be thoroughly understood. The use of prescribed formulas at all times is not desirable. It cripples independent action and thought. After an example is wrought according to formula, pupils should be encouraged to present other methods of solution, and should be commended for any correct solution, especially if it be brief and intelligible.

The answer should in all mental exercises be given first, and then the solution may or may not be given, as the teacher may prefer—*provided*, the teacher is sure that the pupil understands the correct method of solution. A solution may with profit be given by several members of a class, each person called upon taking the solution exactly where it was left by his predecessor, without omission or repetition of a word. This practice secures facility, attention and accuracy. For the purpose of securing solutions according to a prescribed formula, concert exercises may be made very profitable. Great pains should be taken to secure brevity and accuracy in language, in methods and in results.

Classes in arithmetic should have frequent extemporaneous exercises in combining series of numbers, involving the principles which they have gone over. These numbers should be given by the teacher, slowly at first, and afterward with more and more rapidity, as the pupils are able to carry forward the computation. The following is an example: Take 5, add 3, add 10, subtract 9, multiply by 8, add 20, add 8, subtract 40, divide by 10—result? Those who are prepared to answer raise the hand, and the teacher calls on one or more of them individually for the answer, or on all together. Exercises of this kind should be commenced as soon as pupils are able to add simple numbers together, and continued through the entire course. Similar examples may occasionally be carried rapidly around the class, each pupil giving in turn the result for one step of the process, with as little delay as possible.

In all exercises of this kind there is danger that but few will derive benefit from them, unless the teacher is specially watchful, and calls out often those who do not give evidence in their countenances of mental activity. In all cases it is well to get answers from a large number of the class before telling which are right. This course may be pursued. An exercise is given; hands are raised; some one called on gives the result, and all who agree with the result given drop their hands. One of the disagreeing ones gives a result and those who agree drop their hands; and so on till all hands are down. The teacher then

announces the correct answer, or if it be not a lengthy exercise calls upon some one to repeat it, giving results at each step, that those who failed may see the cause of their failure.

§ 4. WRITING.

Writing should be taught as a simultaneous class exercise, all the members of the class attending to the same thing at the same time.

In conducting exercises in writing, teachers should make constant use of the blackboard. Important letters and principles of the copy should be written on the board, both correctly and incorrectly, illustrating the excellencies to be attained and the errors to be avoided. Teachers who are not accustomed to this mode of illustrating will find that they can easily qualify themselves to introduce it.

Many teachers who excel in imparting a knowledge of other branches, teach penmanship only indifferently well. Teachers who have little taste for this exercise should discipline themselves to increased effort. Even a poor writer may make a good teacher of penmanship; and no one who attempts to teach writing is excusable for not teaching it successfully.

Exercises of special excellence should receive marks of special credit; and deficiencies resulting from carelessness or indifference, should in all cases receive marks of error and affect the scholarship averages as much as failures in any other lessons.

Occasionally, in the higher grades, it may be well to place a copy on the blackboard, and require each pupil of the division to hand to the teacher, after so many minutes' practice, what he considers the best imitation of the copy. For this purpose the pupil should write upon slips of paper, the copy being written but once upon each slip, and then the slips being carefully compared, the one with which the pupil is best satisfied should be handed to the teacher for marking.

The practice of directing the movements of the class by counting is recommended. The pupils will thus write with greater care and precision while learning. Rapid writing must succeed slower movements if at all successful.

§ 5. ORAL INSTRUCTION.

This must be considered as essential a part of the course of instruction as any other, and must be made in part the basis of advancement from grade to grade. All examinations in the oral course, at least as far as through the sixth grade, should be entirely oral. From the sixth through the third grade, they should be oral mainly, but may in some parts be written. In the remaining grades there can be no objection to making the examination mainly a written examination.

Teachers should prepare themselves thoroughly upon the topics in the oral course, and be sure that their instructions are simple, concise and accurate. This subject will be more fully treated under the several grades.

While a definite time should be assigned to the exercise, and as a general rule no deviation be allowed from the programme, still occasionally opportunities will arise, when the facts of an object lesson may be more vividly impressed upon the mind than at any other time, and advantage should be taken of this favorable opportunity, though it may call up objects out of their regular order.

“The teacher should never tell the child what he can make the child tell him, and should never give the child any information without calling for it again.”

§ 6. GOOD LANGUAGE.

The importance of this subject cannot be over-estimated. It has been so well stated by Hon. J. G. McMYNN that I quote his words :

“Great attention should be given to the language used in the school-room, both by teachers and pupils. It should be pure English, free from all provincialisms; and the construction of the sentences should be grammatical. It is of the utmost importance that the teachers of our primary scholars should be accurate in the use of language; quick to notice and prompt to correct all ‘bad grammar’ heard in their school-rooms. No *slang*, no useless expletives, no unnecessary repetition, no obsolete words, no violations of orthography or syn-

tax, should, at *any time*, or under any circumstances, be allowed to pass without careful correction. The power of expression may be cultivated by 'Object Lessons' and conversation. Pupils should also be advised and required to write much. Recitations may sometimes be conducted by writing, and will be found profitable. Questions should be pointed and precise; answers should be concise and exact. Every answer should embrace a complete proposition. Frequently the pupil gives the answer only in part. Every exercise and every recitation should be so conducted as to habituate the scholars to correct, terse, and elegant modes of expression. All indistinctness of utterance, all clipping of words, all hesitancy of speech, should at once be noticed and the proper remedies faithfully applied."

Every exercise in the school-room should be made an exercise in the use of language. The most thorough study of the rules of syntax, the most careful analysis in later years, will not correct the bad habits formed in childhood. Many a man skilled in the use of language has never studied for an hour an English Grammar, while many who can parse any sentence given them, affixing the rule for each word, and giving to each rule its proper number, make constant and egregious blunders in their every-day talking or writing. The habits formed in early life are the ground of the difference. Let every teacher be a living grammar, and the "dry study" will become juicy and sweet to the learner.

§ 7. MORALS AND MANNERS.

Love to parents and others, friendship, kindness, gentleness, obedience, honesty, truthfulness, generosity, self-denial, neatness, diligence, etc., are cultivated in children, not so much by direct exhortation and formal precept, as by resorting to expedients that will call these affections and qualities into active exercise. Lead a child to do a kind act, and you will increase his kindness of heart; and this is the best of all lessons on kindness. Let teachers ever remember that the *exercise of virtuous principles, confirmed into habit*, is the true means of establishing a virtuous character.

Little anecdotes and familiar examples, illustrating the love of brothers and sisters, the respect due to the aged, kindness to animals, mutual love of companions and associates, benevolence, etc., are among the best means of cultivating these virtues. Teaching mainly by examples, will accomplish far more than any formal catechism of moral instruction.

Teachers should frequently read to their divisions short, entertaining narratives, and make them the subject of familiar and instructive conversations with their pupils. So also in lessons on animals, trees, and all the works of nature, opportunities should be constantly improved to show the wisdom, power, and goodness of the Creator, and to inculcate the reverence that is due to Him, and a sense of dependence upon Him.

Every case of quarreling, cruelty, fraud, profanity, and vulgarity should be made to appear in its true light. The selfishness of children is the greatest obstacle to moral training. To moderate this strong instinct, to teach self-denial and self-control, must be the constant care of the teacher.

There is no time when the watchfulness of the teacher is more necessary than during the recesses and other hours of relaxation at school. This is the time when little differences are most likely to spring up, and bad passions to gain the ascendancy. No parent's eye is upon the children, and yet they should constantly feel that some kind guardian is near—not to check their cheerful sports, but to encourage every kind and noble act, and to rebuke every departure from the path of virtue and honor.

Good manners are intimately connected with *good morals*, and teachers should improve every opportunity to inculcate lessons of civility and courtesy. In the primary divisions, especially, the teachers should give frequent and somewhat minute directions respecting the ordinary rules of politeness. Let the pupils be taught that when a question is asked them, it shows a lack of good breeding to remain silent or shake the head, even if they are not able to answer it. They should receive some general directions respecting the manners of younger persons in the presence of those who are older. They should be taught that well-bred persons seldom laugh at mistakes, etc.

The manners of the children in their intercourse with each other before and after school, and at the recesses, and in going to and from school, should receive the constant and watchful care of the teacher.

The position of the pupil in his seat; his movements in passing to and from the class; his position in class or at his seat when called upon to recite, should receive the teacher's most careful scrutiny. Bad manners open the door for the entrance of bad morals, and all listless and lounging habits in the school-room are but the sure indication of a loaferish spirit which unchecked will lead to vicious associates and practices. The teacher should respect himself too much to receive any answer from a pupil who is not in a manly posture, and who does not in his tone and manner express sincere respect both for his teacher and the place he holds among his fellows. Nor can the teacher keep too constantly in mind the truth uttered by Marcel—"Nature, reason and experience proclaim this order, *example before precept*."

No teacher can expect to make his pupils more civil, more courteous, or more truthful and virtuous than he shows himself to be. In dress, in movement, in speech, in thought even, he must *be* what he would have his pupils *become*.

§ 8. COMPOSITION WRITING.

There is no school exercise so generally disliked as that of composition writing, and yet none may be made more attractive and certainly none is more valuable. These are some of the first steps to be taken:

1. There should be no set time for the exercise, recurring as is usually the case once in two or three weeks; but instead, brief and frequent exercises should be required at less intervals.

2. The subjects should always be those about which the pupil has been studying, or upon which oral instruction has been given. If for any reason the teacher desires compositions upon some particular topic, that topic should be made the subject of a lesson or many lessons, as its importance may demand. Leading questions may then be addressed to the child, and his answers will be his composition for the time. Special

commendation should be given for any additional facts or arguments not called for by the teacher.

3. All errors that occur in the use of words in spelling, use of capitals, punctuation or division into paragraphs should be carefully marked in the margin by the teacher by the use of "W" for an error in the use of a word—"S" for errors in spelling—"C" in use of capitals or in the improper use of small letters—"P" for punctuation—"¶" for improper divisions into paragraphs—"O" for any omission of word, or pause, or letter. The proper abbreviation should be placed upon the line in which the error occurs, and the particular spot may be indicated by a dash or not, as the age and advancement of the pupil may seem to demand.

4. The pupils should be called upon to read these exercises, and then written criticisms may or may not be called for, according to the advancement of the writer. In all cases, however, the second exercise should be a re-writing of the first, with corrections, enlargement, or what I think still better, *condensation*. Let special praise be awarded the child who has properly expressed the most thoughts in the fewest words.

The second writing should be presented to the teacher with the original, that he may determine more readily whether or not the needed corrections have been made.

5. Time will be required for the successful carrying out of this work, but it need not be *extra* time, for it may, in most cases, take the place of written abstracts and reviews, at least in the Grammar Department.

§ 9. SINGING.

Little need be said upon this subject since all the exercises outside of the book used are under the direction of the teachers of vocal music. There is, however, one important caution to be observed. Children should not be left to sing while the teacher is engaged in other work. During the exercise the undivided attention of the teacher should be given to it. Beside the regular times for singing, a single verse sung with life, when a spirit of listlessness or of weariness seems to creep over the school, will do much to awaken and refresh the pupils.

It is well to associate music with many of the physical exercises of the school.

All the pupils should give strict attention to the exercise, because nearly or quite all may learn to sing, and because the very few who may not learn to sing may be very much profited by the accompanying exercises—beating time and reading the music. Little profit will come from a singing exercise unless *spirited attention* be given to it.

§ 10. ABSTRACTS AND REVIEWS.

Each lesson should be made, to some extent, a review of the previous lesson, without, however, consuming very much time, except in cases in which the previous recitation has been unsatisfactory. Pupils should understand that they are liable to be called on to recite any portion of the previous lesson, and questions enough should be asked in review to make it necessary for them to read over the last lesson before coming to the recitation, unless their previous preparation has been sufficient to fasten it on the memory.

The oral lessons should, in most cases, be reviewed more than once, and in all cases, till they are thoroughly learned and remembered.

In most of the studies in which the recitations occur daily, one lesson each week should be a review of the four preceding lessons. Classes reciting only two or three times a week may have a review every second week; and there may be a few exceptional cases in which it will be best to have these reviews only once a month.

In the primary divisions, the reviews will necessarily be oral; but in the grammar divisions they should be both oral and written. In the 1st, 2d and 3d grades, most of the classes should have at least one written review in a month, beside the oral reviews.

It may be well, occasionally, to devote an hour to a written review of all the different branches, in one exercise, selecting ten or more questions promiscuously from all the studies of the class.

In the five upper grades, all the classes should have occa-

sional exercises in writing a few lines of prose or verse, dictated orally by the teacher, as a test of their proficiency in spelling, punctuation, use of capitals, penmanship, etc. In the 4th and 5th grades, the pupils may use either pen or pencil, at the discretion of the teacher; but in the 1st, 2d and 3d grades they should be required in all cases to use a pen. These exercises should be strictly extemporaneous, and every paper should be passed to the desk at the close of a specified time.

One of the best methods of conducting written reviews, is to write several topics distinctly on the blackboard, and require the pupils to expand them as fully and accurately as possible. Each pupil should be seated by himself, if practicable, and furnished with pen and paper; but he should receive no assistance, direct or indirect, from either teacher or text-book. Great care should be taken to remove from the pupils, as far as possible, all temptation to seek assistance from books, or papers, or class-mates. When two pupils of a class are seated at the same desk, it is often desirable to have two sets of questions of about equal difficulty—one set for all the pupils sitting at one end of the desks, and one for those sitting at the other end.

Written reviews are among the most successful means that can be employed for securing thoroughness and accuracy of scholarship. They afford a reliable test of the pupil's knowledge of the subject, cultivate habits of freedom and accuracy in the use of language, and afford a valuable discipline to the mind, by throwing the pupil entirely upon his own resources.

In addition to the written reviews, teachers of the higher divisions should require frequent written exercises in connection with the daily recitations in history, grammar, arithmetic, etc.

All written reviews, abstracts, etc., should pass under the critical examination of the teacher; the important errors should be corrected; and pupils presenting papers carelessly written, should be required to re-write them.

§ 11. DIVISIONS, CLASSES AND RECITATIONS.

1. *Number of Classes in a Division.*—As a general rule, the pupils assigned to each teacher in the Grammar Depart-

ment should be divided into two classes; in the 5th, 6th, 7th and 8th grades, into three classes; and in the 9th and 10th grades, into four.

The number of pupils in a division, or other circumstances, may make it desirable, in certain cases, to depart from this arrangement.

2. *Number of Branches to be pursued at the same time.*—It requires the constant watchfulness of teachers to prevent pupils from undertaking too many branches of study at a time. Pupils should rarely be allowed to study more than three branches at once, besides reading, spelling and writing; and it is generally better to have some of the lessons come only on alternate days than to have even the six exercises in one day.

In all cases, however, the branches assigned to the grade should be kept along as uniformly as possible, so that none be completed while others are neglected. The course of study is arranged with reference to the mental wants of the child, and some variety is absolutely essential to the best progress in study.

3. *Order of Exercises and Length of Recitations.*—Every teacher should have posted up in the room an established order of exercises for each day in the week, assigning a definite time for the beginning and ending of every exercise, and of every interval between the exercises, and this order should assign also definitely the times for, and topics of study, as well as recitation.

It is impracticable to establish a uniform rule respecting the frequency and length of recitations. The following scale will serve as a general guide to teachers in this matter:

Recitations in the Grammar Department from twenty-five to forty minutes in length, except exercises in spelling, which may usually be completed in fifteen to twenty-five minutes; in the 5th, 6th and 7th grades, from twenty to twenty-five minutes; in the 8th and 9th grades, from fifteen to twenty minutes; and in the 10th grade, from ten to fifteen minutes.

4. *Frequency of Recitations.*—The following arrangement will serve as a general guide, but cases may sometimes arise in which it will be necessary to depart from it:

Reading classes in the 1st grade, two or three times a week ; in the 2d and 3d grades, three or four times ; 4th grade, four or five times ; 5th and 6th grades, five to eight times ; 7th and 8th grades, eight to ten times.

Slate arithmetic, three or four times a week ; mental arithmetic, in 4th and 5th grades, four or five times a week ; in 3d grade, three or four times ; in 2d grade, two or three times. Numbers, in five lowest grades, five times a week.

Geography, from three to five times a week.

History, three or four times a week.

Grammar, from three to five times a week.

Spelling, in 1st grade, two or three times a week ; 2d and 3d grades, three or four times ; 4th grade, four or five times ; all grades below the 4th, eight to ten times.

Writing, in the grammar divisions, two or three times a week ; in the 5th and 6th grades, four or five times.

5. *Division of Time and Labor.*—In deciding what proportion of time shall be given to spelling by letters, what to spelling by sounds, to reading, to numbers, to geography, etc., the rule should be this : whenever a class is less advanced in one branch assigned to the division than in other branches, let that particular branch receive special attention till it is as familiar as the others. It is very common to find a class more advanced in reading than in numbers, and still devoting less attention to arithmetic than to reading ; the observance of this rule will correct all such errors.

§ 12. PHYSICAL EXERCISES.

The object of these exercises is Physical Culture. By the position of the body in study, there comes weariness, which may but be relieved by change of position. By inactivity of the body in study there comes sluggishness in the flow of all the vital fluids, and an unhealthy state of all the muscles.

Change of posture and activity are essential in these physical exercises. All the pupils, except such as may be excused on account of ill health, should be required to participate, and to enter into them with energy and promptness. No good comes from any other than a lively and spirited exercise. The

teacher should lead the pupil, inasmuch as she needs the exercise nearly as much as they, and still farther because her own interest will awaken interest on the part of the pupils. As to kinds of exercise, there is variety enough in the schools, and any teacher who is not acquainted with the best forms, can readily learn them from more experienced teachers. In teaching the different series of movements, the initial letters may be used: as, "U." for Upward, "D." for Downward, "F." for Forward, "B." for Backward, etc., etc. "R. U." would indicate Right hand up, "L. D." Left hand down, etc., etc., or the full words may be given until the class is familiar with the order. Music or counting should accompany the exercises.

§ 13. MENTAL DISCIPLINE.

The highest ultimate object of intellectual education is mental discipline; and this discipline can only be acquired by mental labor. Examples are frequently arising in which teachers give assistance that is not required, and thus rob the pupils of the discipline which they would gain by overcoming the difficulties themselves. Teachers should study carefully the capabilities of their pupils, and never do for them what they are able to do without assistance. Pupils should also be guarded against the dangerous habit of assisting one another, without the knowledge and approval of the teacher.

It is also true that some pupils suffer from the want of a little assistance given at the proper time and in the proper way. This should never be direct, but by starting back to some point which the pupil does understand let him be led up to the difficulty in his path by careful steps, which he shall take for himself. These steps may be simple illustrations of what he does understand, and yet similar to the difficulties to be encountered. By overcoming these, he may gain strength to overcome the greater, and a little care and time taken to-day, may save time and care for all future days. The principal difficulties in a pupil's path lie in his inability to apply principles to examples that vary in form and phraseology from the illustrations given him when he learned the principles. The similarity of

examples should be shown the pupil and he will thus be prepared to do what before he thought he could not do.

It is one of the most important duties of the teacher, to exercise a watchful care over the pupils' hours and habits of study. Some pupils never learn to study a lesson abstractedly and with the whole mind; and some teachers have heretofore been so unfortunate as not to know that they have any special responsibility in this matter.

The power of attention is essential to the successful prosecution of study at every stage of progress, and the best efforts of teachers should be directed to the cultivation of this great educational power.

§ 14. GENERAL EXERCISES.

In all the exercises of the school room order is of the first importance. It is *often* the case that that school is best governed in which there is the least apparent show of attempts to govern. It is *certain* that a noisy teacher will have a noisy school. Constant and nervous calls to order, only make the repetition of such calls more and more necessary. The voice of the teacher should seldom be heard in securing the attention of pupils, and rarely if ever above the natural key. The bell in the hand of the teacher should not be rung as though the necessity for some sudden alarm existed, but a single tap or a succession of light and constantly lighter taps, will suffice with a teacher who can stand calm and self-possessed in the presence of the school. Quiet and patient demeanor is worth more than bluster. If a scholar needs reproof for idleness or inattention, the fixed gaze of the teacher upon such scholar until his roving eye rests upon her, will in the majority of cases serve the purpose better than calling the name of the pupil. Frequent calling of the names of disorderly pupils often creates more disorder than it cures, since it distracts the attention of others, who would not otherwise have been disturbed.

Some general directions may here be given as to signals by which the movements of pupils may be directed. For recesses, opening and closing school, these may all be given by the large

bell in the hall. For exercises in rooms where there is a musical instrument, all the movements may be directed by signals given from the instrument. In all other cases when the teacher directs the movements of her room, I would advise the use of what may be called initial signals. If she wishes a class to give attention, "A;" to turn in their seats, "T;" to rise, "R;" to get in proper line for marching or for any other purpose, "L;" to move or march, "M;" to face about and change direction of movement, "F;" to halt, "H;" to sit, "S." In all cases the signal is the initial letter of the word of command. Preparatory to marching, some measures may be counted that shall indicate the desired speed, thus: 1, 2; 1, 2; 1, 2; 1, "M."

§ 15. CORPORAL PUNISHMENT.

This may be resorted to in extreme cases, and but a single caution is needed. Let it be inflicted at some fixed time, long enough after the offence to allow time for calm and sober reflection on the part of both teacher and pupil. The necessity for it may have passed before the time arrives, in voluntary confession of wrong on the part of the pupil or it may be of the teacher, (for it is possible that the teacher may be wrong,) or in the discovery of some substitute that may serve the same purpose with better effect upon both pupil and teacher. Confession of wrong done, never should weaken the respect of the teacher for the pupil, and will never weaken the authority of the teacher who may have erred. All punishments which inflict bodily pain must be considered as corporal punishments. Punishment should never be inflicted upon the head of a child or in the vicinity of any of the more exposed vital organs. It should always be reasonable and adapted to the offence committed. If any teacher cherish the laudable purpose to govern without corporal punishment, it is better that such purpose be kept a secret from the pupils. No good can come from telling the pupils of such a purpose, and much harm may result.

GRADED COURSE.

TENTH GRADE.

Oral Instruction.—Different parts of the human body; five senses; common objects, their size, color and more observable properties.

Morals and Manners.

Reading from blackboard and from cards, with exercises in spelling, both by letters and sounds, until the child can call at sight and spell correctly at least one hundred of the words found in the first half of the primer. Two or more lessons each day.

Counting from one to sixty. Simple exercises in adding, with use of numeral frame.

Drawing on the slate; imitating simple forms, letters, figures and other objects sketched by the teacher.

Printing or Writing the reading and spelling lessons, and the Arabic numbers as far as twenty. Two or more exercises a day.

Singing.

Physical Exercises as often as once every half hour; each exercise from three to five minutes.

The recitations in this grade should never exceed fifteen minutes each, and in some lessons ten minutes will be time enough.

§ 16. ORAL INSTRUCTION.

The Oral Course for the Primary Grades has been arranged with reference to the natural order of development of the child's faculties; 1st, Perceptive. 2d, Conceptive. 3d, Comparing or reasoning.

Common Objects.—Since the tenth grade should be regarded as a bridge from the freedom of home life to the more regular discipline of the school room, the first lessons should be simple conversational exercises upon home objects, with which the children are already familiar, and in which they feel the greatest interest; their toys, their pets, their plays, their friends, etc., etc. They should be encouraged to give the teacher all the knowledge they possess, and should be stimulated to learn by careful observation more than they already know. Habits of observation and of accuracy in the use of language are of the first importance. Pupils should be encouraged to bring to the teacher objects for examination, so far as it may be done conveniently and with propriety. There need be no limit as to the character of these familiar objects. All observable properties should be noted without any very rigid attempt at classifica-

tion. Short and pertinent anecdotes may enforce the lesson which should always cease the moment the interest of the class flags. If the child in this grade can be induced to pass along with all his senses in active exercise, very much good will be accomplished. As to size, color and parts of these common objects, the aim should be to secure the child's own ideas and to correct such as are erroneous, in all cases avoiding the use of difficult words, and making the instruction as simple and as comprehensive as possible.

The Five Senses.—As the child comes in contact with objects in his daily life, he will see, hear, smell, touch or taste them. Upon some objects a single sense may be employed; upon others, several or even all. It is important at the outset that he learn something about the organs of seeing, hearing, smelling, feeling and tasting, and their proper uses. Much may be said of the blind, and the acuteness of their other senses, and so of the deaf, and of the reasons why persons born deaf do not learn to speak. The proper care of each of the organs should be enforced. The duty of sympathy for the unfortunate should be impressed upon the minds of all. The methods of instruction of the blind and of the deaf mutes will interest and profit those who have not already some knowledge of them. The comparison of these methods with theirs, and the occasion those in full possession of their senses have for gratitude, will serve as the basis of important lessons.

The Human Body.—This topic should embrace only the more general divisions of the body, as, the head and its parts, skull, face, ears, eyes, nose, mouth, chin and their relative position and uses; body, chest, neck, throat, lungs, heart, stomach; limbs, arms, legs, elbows, wrists, hands, fingers, knees, ankles, feet, toes. Something may be said about the bones and the flesh, but only such things as a child may comprehend. See § 5.

Morals and Manners.—See § 7 and 6.

§ 17. READING.

If any single method of teaching this branch must be pursued to the exclusion of all others, it should be the word-method. But no such necessity exists, nor would such a course

be at all desirable or profitable. Prominence should be given to the word-method. The cards furnish words, and the child should be made so familiar with them that he can call them at sight, without the necessity of allowing him time to examine the component parts of the word. He should learn the names of words as he learns his schoolmates, from their general form and peculiarities. That he may distinguish John from Harry, he does not necessarily notice each feature of each boy, but the *general* impression made upon his mind enables him to distinguish the one from the other. When close resemblances exist, it is necessary that his attention be called to some one distinguishing feature. Were the pupil called upon only to learn words that are quite or entirely dissimilar to each other, no other than the word-method would be needed, but to every word he learns to-day, he will find ere long some other word quite similar in form. He should therefore be taught the separate features of each word, that where he finds one generally similar he may be able to fasten upon some point of difference that may serve as his guide in naming his acquaintances.

Hence, the word method should be followed or accompanied by the analytic and synthetic, or spelling method. In using the cards a large number of exercises may be introduced besides those found thereon. The words may be combined into an almost infinite variety of sentences. The teacher may give short and simple sentences, containing words found upon the cards, and require the pupils in turn to find the words upon the cards, or she may require some one pupil to point out the words while the class reads the sentence after his pointing. Sentences may be printed upon the board and the pupils be required to find the words upon the cards.

In introducing the words from the primer, the pupils should not have the book, but should learn the words as printed by the teacher. These words should be framed into sentences unlike those found in the primer, so that when the ninth grade is reached and the pupil takes the primer into his hands, he will meet familiar words but in new relations, and from the same words with which he has become acquainted he will gain

new ideas. The oral exercises should be made subservient to this reading exercise. The child should be taught the names of objects about which he is learning, unless they be too difficult, so that he may recognize the word-picture of the object as he recognizes any other picture. Nearly all monosyllabic names of common objects, he may learn in connection with his object lessons without much extra effort on the part of the teacher. Indeed, each reading lesson should be made, in part at least, an object lesson.

No exercise in reading or in any other branch of this grade should be continued when the class shows signs of weariness, or of uncontrollable inattention. See § 1.

§ 18. SPELLING.

This exercise has been hinted at in § 2. Spelling by letters may properly be extended to all words learned, but spelling by sounds should be confined at first to such words as contain only the simplest elemental sounds, and in all cases in this grade to single letters, excluding diphthongs and double consonants, also excluding words having silent letters. There are words enough to occupy all the time that can be given to this subject in the grade, without introducing any excepted as above.

Let the teacher take special pains to secure accurate and distinct articulation of each vowel and single consonant. Connected with these vocal exercises should be associated exercises in breathing—such as silent and prolonged inhalation and exhalation, silent and rapid breathing, quick and full inhalation followed by prolonged and silent exhalation, prolonged and silent inhalation, followed by rapid exhalation; rapid inhalation with explosive exhalation. All these exercises in breathing should be very short.

Vocal exercises may also be combined with physical exercises, especially in the utterance of the vowel sounds, each being connected with some movement of hands or feet.

The exercises may be varied also as to time, pitch, and volume. Sounds may be prolonged or shortened, may be made high or low, may be given in a whisper or with full tone. See § 2.

§ 19. COUNTING.

In this exercise, at first, pebbles, beans, or better still, small blocks an inch square should be used. Children may also make marks upon their slates, and count them, or they may be required to make a certain number of marks not exceeding sixty. In counting, they should be required to commence at any point and count either forward or backward. They should be able to call at sight and to write the Arabic numbers as far as twenty.

§ 20. PHYSICAL EXERCISES, See § 12.

§ 21. MORAL AND MANNERS, See § 7.

§ 22. DRAWING.

It is designed that the simplest forms shall be used in the drawing exercise. Straight lines, triangles of different kinds, the square, and the rectangle. The names need not be given, the object being skill in the use of the pencil. The teacher should sketch objects of different kinds, embracing the figures given above, and draw upon the board, giving the pupils opportunity to follow her line by line. After the first attempt with the model before them upon the board, they should be encouraged to make many copies. Occasionally they may be allowed to put their various forms together to suit their own tastes.

§ 23. WRITING.

The children of this grade may, in connection with their drawing lesson, be taught the use of the pencil in making small letters in script form. They should be taught how to hold the pencil in forming such letters. The exercise should be a simultaneous exercise, and should be conducted by the teacher carefully and systematically. See § 4.

NINTH GRADE.

Oral Instruction.—Domestic animals; trees; primary colors; the three kingdoms of nature.

Morals and Manners.

Reading and Spelling.—Exercises upon blackboard and cards continued; tenth grade lessons reviewed; primer completed and reviewed; spelling both by letters and sounds; the exercises in both reading and spelling at least twice each day; the names and forms of the different pauses, with the proper use of the period.

Counting from one to one hundred; reading and writing Arabic numbers to one hundred; addition tables from blackboard to 4 plus 10 forward, backward, and irregularly, with use of numeral frame; Roman numerals to L, both in course and out of course; exercises in adding series of small numbers.

Drawing.—Exercises at least twice each day with slate and pencil, using elementary cards when they can be obtained; printing or writing lessons in spelling numerals, etc., etc.

Singing.

Physical exercises from two to five minutes at a time, not less than five times a day.

§ 24. ORAL INSTRUCTION.

Classification of Natural Productions.—Many objects may have been discussed in the presence of the tenth grade classes that will come properly before them in the remaining grades of the Primary Department, but thus far there has been no attempt at classification. The object has been to awaken curiosity in any direction pleasing to the child. With this grade commences a system to be followed through succeeding grades. The classification of all objects under three general heads—animal, vegetable, and mineral—according to the three great kingdoms of nature. It will be sufficient for the purposes of classification to give the following definitions. Animals are living beings, having the powers of seeing, hearing, smelling, feeling and tasting, and also having the power of voluntary motion. Vegetables are living things, but do not have the powers of sensation or of voluntary motion. All other objects are minerals. These distinctions are correct, though the limits between animals and vegetables, and between vegetables and minerals are not easily determined, so that in a very few instances not often brought to the notice of children, it is difficult to place objects in their proper class. The course to be pursued may be briefly sketched thus. An object is

presented. The following series of questions may be asked: Has it life? Can it move of itself? Can it see? Can it hear? Can it smell? Can it feel? Can it taste? If all these questions can be answered in the affirmative there is no doubt that it is an animal. If all must be answered in the negative, it must be a mineral. If the first question can be answered by *yes* and all the others must be answered by *no*, then it is a vegetable. This exhaustive process may be carried out in full or in part, in all cases, until the child classifies readily. Difficulties will arise when dead animals are presented, and especially when ripened and perfected fruits and esculent vegetables are considered, but in such cases the difficulty may be solved, if instead of asking the questions propounded above, the form be varied so as to read—Has it ever had life? Has it ever seen? etc., etc. Has it ever had the power of voluntary motion? Let the questions be asked either in the one form or the other whenever a new object is presented, and there will be little danger of improper classifications.

Animal productions may also be discussed. Such things as have at any time formed part of any animal, are animal productions, as feathers, hair, bristles, &c., &c.; hides, skins, furs, leather, &c., &c.; bone, ivory, horn, shells, &c., &c. In the same manner vegetable and mineral productions may be discussed.

Domestic Animals.—The cat, the dog, the horse, the cow, the sheep, the hog, the hen, the duck, the goose, the turkey, &c., may serve as illustrations. Their general structure, their relative size, and their clothing or covering may be considered. The head, eyes, ears, nose, and feet of each should be quite fully discussed. The varieties of tone in their utterances; their modes of defense when attacked; their methods in lying down and in rising, or their positions while resting, and their varied movements in walking, running, flying, &c., their kinds of food, and their teeth (where any are observable), should be made prominent topics of conversation. Anecdotes showing their intelligence, sagacity and cunning, should be drawn from the children, or given to them to be called for again. Instances

of affection for one another or for man, and of treachery will be found interesting and profitable.

Trees.—Such trees as children have the opportunity of seeing and of studying should be selected. Their general structure, their bark and their leaves may be discussed in such a way as to teach a child the difference between an oak, a hickory, a maple, a cottonwood, an elm, a pine, and a cedar, &c. Their method of growth, the uses of their roots, and of their leaves, should be understood.

Primary Colors.—These are red, blue and yellow. Pieces of paper or of cloth having any one of these colors may be constantly before the child as book-marks. Flowers may be compared with some one, or all, of these patterns and their colors approximately determined. Nothing should be said of other colors, until these are made familiar to the child. The following distinctions may be properly observed: light red, red, and dark red; light blue, blue, and dark blue; light yellow, yellow, and dark yellow. All objects that have any one of these colors may be talked about with reference to their color and may be compared with other objects similar in color. See §§ 5, 16, 6.

§ 25. READING AND SPELLING.

In this grade pupils are introduced to the use of a book. Much care should be taken to teach the child how to hold his book and to turn the leaves properly. The book should always be held in the left hand, having the thumb and little finger upon the face of the book when opened, and the other fingers upon the back. The index finger of the right hand may then be used to aid the child in keeping his place, or to turn the leaf when needed.

The pupils should be able to point out and explain the *title-page*, *table of contents*, *leaves*, *pages*, *margins*, *frontispiece*, and the *headings* or the *titles* of the lessons.

While the pupil reads the first part of the primer, it is well that a portion of each exercise be devoted to teaching the new words that will be found in the last part of the book and extending the exercise as the pupil advances, even to the new

words found in the first part of the first reader. In doing this, care should be taken to construct sentences unlike those found in the book. The words and sentences should be taught from the board unless the words are found upon the card used.

In preparing an exercise in spelling, it is highly important that young pupils should hear the words pronounced by the teacher. A very useful method is, for the teacher first to pronounce all the words of the lesson distinctly, while the pupils listen attentively and point to the words in the books, as they are pronounced. Next, the teacher pronounces one word, which is repeated by the first scholar in the class; then another word, which is repeated by the second scholar, and so on. After this, if time permits, the teacher and class may pronounce in concert, and then the class pronounce in concert without the teacher.

All the spelling lessons should be neatly written or printed by the pupils on their slates, and the class should be required to read the words from their slates in connection with the spelling exercises. See also §§ 1, 17.

§ 26. NUMBERS.

The children should be taught to construct their own addition tables by the use of the slate and pencil, and a great variety of exercises may be introduced that shall give them facility in adding and subtracting as far as the grade extends. As indicating some of the exercises that may be given, the following may serve, it being understood that the blank space is to be filled by the child :

$1+2=$	$1+1+2+3=$
$2+3=$	$2+ \quad +1+1=6$
$3+ \quad =7$	$1+1+1+ \quad =11$
$\quad +9=12$	$4+1+1+3=$

These exercises may be extended with profit, if the teacher is careful that the sum of the numbers given shall not exceed $4+10$ or 14 . See also § 19.

§ 27. DRAWING, PRINTING, ETC.

The teachers of this grade should assign definite lessons in drawing, printing, etc., to be prepared by all the pupils, with

the same regularity and care as any other exercise. The teacher should spend at least ten minutes each day in assisting the pupils and giving such directions as they may need. When the exercises are completed, they should in all cases be examined by the teacher. Lessons of special excellence should receive marks of credit, and failures resulting from carelessness or indifference, should receive marks of error. See § 22.

§ 28. MORALS AND MANNERS. See § 7.

§ 29. VERSES AND MAXIMS.

§ 30. ANALYSIS OF SOUNDS.

In this grade, this should extend no farther than to vowels and single consonants as a separate exercise, and attention should be paid mainly to clear articulation and to its necessary attendant, an open mouth. See §§ 1, 17.

EIGHTH GRADE.

Oral Instruction.—Wild animals; secondary colors; plants and vegetables; divisions of time and their names.

Morals and Manners.

Reading and Spelling.—First reader read and reviewed, with particular attention to punctuation, definitions and illustrations; short daily drill in enunciating vowels, consonants, and combinations of vowels and consonants; spelling the columns of words, and words selected from the reading lessons, both by letters and by sounds.

Drawing and Writing.—Two or more exercises a day with slate and pencil, or paper and pencil, and printing or writing lessons in spelling and arithmetic.

Addition and Subtraction Tables.—Exercises in adding series of numbers; reading and writing Roman numerals to one hundred, forward, backward and irregularly.

Singing.

Physical exercises from two to five minutes at a time, not less than five times a day.

§ 31. ORAL INSTRUCTION.

Wild Animals.—Much that was said under the head of domestic animals in the ninth grade is applicable here. A few only of the more common field animals should be treated of, and generally such as children have some opportunity of seeing. The elephant, the camel, the deer, the bear, the tiger, the fox, the rabbit, the eagle, the owl, the pigeon, the whale, the shark, the alligator, the trout, the caterpillar, the bee, the

housefly, and the mosquito may be sufficient examples. Their peculiar structure, their resemblances to domestic animals, their habits of living, their weapons of warfare, the modes of capture, and their degrees of intelligence should be learned. Each teacher may extend this list as far as time and the interest of the class will admit. At each lesson some instructive anecdote should be given, and the same should be called for at the next recitation.

Secondary Colors.—These are violet, indigo, green and orange. The first two are composed of red and blue; the third of yellow and blue, and the last of red and yellow. Any piece of glass that will give the solar spectrum may be brought into the school room, and the child may point out the various colors, both primary and secondary; pieces of cloth or of paper may also be used as standards to which objects may be applied when the color is to be tested. These standards should be of a decided color. But little time should be spent in this grade upon the color of objects unless it approximates quite near to some one of the seven colors already given.

Plants and Vegetables.—The names of the more common garden and house plants, and their manner of growth, their times of flowering, etc., belong to this grade. All garden vegetables, especially such as are esculents may be discussed as to their manner of growth, from the first sprouting of the seed to the full development of the vegetable, and as to their form, size, color and parts.

Divisions of Time.—This should include the year; the months and their names; the day and the names of the days of the week; the seasons, their names, and the names of the months in each season. The pupil may also learn something of the method by which the time is determined by the clock. See § § 5, 24, 6.

§ 32. MORAL AND MANNERS.

§ 33. VERSES AND MAXIMS.

§ 34. READING.

The general directions and the directions given in the earlier grades are applicable here. See § § 1, 17, 25.

§ 35. SPELLING.

Let the children spell their own names; the name of the city; State; days of the week; months of the year. These exercises should be repeated till the pupils are able to perform them well. See, also, § 2.

§ 36. ANALYSIS OF SOUNDS. See §§ 17, 18, 30.

§ 37. DRAWING AND WRITING. See §§ 4, 22, 23, 27.

§ 38. NUMBERS. See §§ 3, 26.

§ 39. COUNTING.

This should still be practiced and the exercise may embrace counting by twos, as 2, 4, 6, etc., or 1, 3, 5, etc., as far as 100. See § 19.

SEVENTH GRADE.

Oral Instruction.—Trades, tools and materials; lines and angles; general classification of animals; tints and shades.

Morals and Manners.

Reading and Spelling.—First half of Second Reader, with careful attention to punctuation, illustrations and definitions; short daily drill in enunciating difficult combinations of consonants, and the more difficult words of the reading lessons; spelling, both by letters and by sounds, half through monosyllabic words in the Speller and from the reading lessons.

Drawing and Printing.—Two or more lessons a day from Drawing Cards, when they can be obtained, and printing and writing lessons in spelling.

Multiplication and Division Tables—Through 5s; Arabic and Roman Numerals to 500; exercises in adding and subtracting series of numbers.

Singing.

Physical Exercises—From two to four minutes at a time, not less than five times a day.

§ 40. ORAL INSTRUCTION.

General Classification of Animals.—Following the preceding grades in which animals, domestic and wild, have been considered, it is desirable that children should be taught to classify the animals about which they have learned, and here is introduced the general classification into beasts, birds, fishes, insects and reptiles. The animals about which they have already learned something may now be re-examined with reference to the particular class to which they belong, and other examples of each of these classes may be presented. The

distinguishing features, or rather such as are most readily recognized by the child should be carefully considered.

Color.—Tints and shades in color, naturally follow the consideration of the primary and secondary colors, and they are placed in this grade for a specific and for a general purpose; specific, so far as the tints and shades are themselves concerned, and general, inasmuch as it affords an opportunity for the teacher to take up all the varieties of color that are observed, assigning each to some one of the general divisions of color and giving to each some name that will best designate it. As in the other grades, samples should be arranged, first with reference to the natural order of colors, and secondly, with reference to complementary colors. There may be placed also before the child examples of colors that harmonize and suit each other, and of the opposite, for the purpose of cultivating the taste.

Trades, Tools and Materials.—In calling out the knowledge of the child upon this topic, such trades as are connected with the absolute necessities of life should be first considered; first, because the most important and then because these afford the most abundant facilities for observation. Of such are the trades of the carpenter, the mason, the painter; the shoemaker, the tailor, the milliner; the blacksmith, the plumber, the tin-worker; the farmer, the miller, the baker; the house-mover, the sewer-builder, the cistern-maker, etc., etc. After these and other more common trades, should come such as are engaged in by the parents of the children, and these should be followed by as many trades as the teacher finds time to call up. The names and uses of the several tools employed by each tradesman, and the materials wrought upon, with the articles manufactured should be called for. By way of review, take some object, the school room for example, and inquire how many tradesmen have had something to do in its construction, what tools and what materials they used.

Lines and Angles.—This introduces the subject of Geometry. Great care must be taken to make definitions clear, concise and truthful. The meaning and application of the terms, *straight*, *curved*, *crooked*, *horizontal*, *vertical* and *oblique*, as applied to

lines, should be impressed upon the mind of the child by many illustrations, each of which he should be called upon to repeat or to present in some new form.

With reference to angles, the terms, *acute*, *obtuse* and *right* must be employed, and with the right angle, the term *perpendicular* should be explained. While the terms vertical and perpendicular are in some respects synonymous, it will be better for the child that he be taught the term perpendicular only in connection with the right angle when two lines are used, for such is its proper use in Geometry. A vertical line can have but one direction, and that is toward the zenith. A perpendicular line may be either vertical, oblique or horizontal, provided only it form a right angle with some other line.

In connection with their Drawing, the children may have frequent applications of the terms used in connection with this part of their course. See §§ 5, 16, 24, 31, 6.

MORALS AND MANNERS. See § 7.

DRAWING. See §§ 22, 27.

§ 41. READING.

The practice of teaching children new words may still be continued, provided it be confined to words that they are to meet in the latter part of the Reader. See §§ 1, 17, 25.

§ 42. SPELLING.

In this grade the child is introduced to the use of the Spelling Book. When the lesson is assigned, the teacher should carefully pronounce each word of the lesson and require the class to repeat it in concert, having their attention fixed upon the word, so that when the word is studied by the class at their seats, no incorrect or imperfect pronunciation shall make trouble when the recitation comes. See §§ 2, 18.

§ 43. NUMBERS.

The Multiplication and Division Tables may easily be learned together and at the same time. When the child learns that four times five is twenty, he may also readily learn that five is

contained four times in twenty. Suppose the child to be constructing his own tables, he makes five marks, and then five more, and so on until he has four sets of these marks, thus: IIII, IIII, IIII, IIII. When he counts these marks and finds twenty of them, he cannot help seeing that there are four fives in twenty. Now, let him take five times four in the same manner and he will not only multiply four by five, but he will also learn that there are five fours in twenty.

By way of review, let an exercise of this kind be given :

$$3 \times 4 =$$

$$3 \times = 15$$

$$\times 5 = 30$$

$$2 \times 2 \times 4 =$$

$$2 \times \times 2 = 12$$

$$3 \times 3 \times 5 =$$

Or, this :

$$\times = 20$$

$$\times = 15$$

$$\times = 30$$

$$\times = 40$$

In three of the above cases, the blanks may be filled by more than one set of numbers, without going beyond what the grade requires, as :

$$2 \times 10 = 20$$

$$5 \times 6 = 30$$

$$5 \times 8 = 40$$

$$5 \times 4 = 20$$

$$3 \times 10 = 30$$

$$4 \times 10 = 40$$

This exercise will keep children well employed at their seats. See §§ 3, 6, 26.

SIXTH GRADE.

Oral Instruction.—Articles eaten and worn (distinguishing foreign from home products); plane figures; circle and its parts; flowers and fruits.

Morals and Manners.

Reading and Spelling.—Second reader completed and reviewed, with strict attention to punctuation, definitions, and illustrations; frequent exercises in enunciating difficult combinations of consonants, and of the more difficult words of the reading lessons; spelling both by letters and by sounds, with definitions from speller through monosyllables, and from reading lessons.

Drawing with slate and pencil, or paper and pencil, using drawing cards, cuts from other books and other copies; writing the large letters of the alphabet in plain script hand; also words from reading and spelling lessons.

Elementary Arithmetic completed through the 12s with frequent applications and illustrations other than those in the text book; exercises in adding, subtracting, multiplying and dividing series of numbers; reading and writing Arabic and Roman numerals to one thousand.

Abbreviations.

Singing.

Physical Exercises from two to four minutes at a time, not less than four times a day.

§ 44. ORAL INSTRUCTION.

Articles Eaten and Worn.—The more common articles of food and of apparel are first to be taken up, and after these, if time permit, the less common and the luxuries. Children will need a map before them that they may find the places from which the articles are brought. Special pains should be taken to distinguish *home* from *foreign products*. The methods of growth and the preparation needed to fit articles of food for the table, and the process of manufacture of articles of wearing apparel; the different kinds of food and of clothing suited to warm and to cold climates; the kinds of animals best fitted to our wants, both with reference to food and to clothing; the articles raised and manufactured at home that are sold in exchange for foreign articles. These topics should occupy the attention of the children, until they have some knowledge of articles found upon the table and in the wardrobe.

To make the matter more definite, it will be sufficient to treat of the following articles of food and of apparel:

Of Food.—Different kinds of flour and meal, as wheat, rye, corn and oats, and the modes of preparation of each; bread of different kinds, and how made; butter and cheese; meats, as beef, pork, mutton, poultry, fish, how prepared for market and how cooked; salted meats; salt, pepper, ginger, cinnamon, and nutmegs; sugars of different kinds, and how made; tea, coffee, and chocolate; lemons, oranges, pine apples, raisins, peanuts, and walnuts; honey: candies of different kinds.

Of Apparel.—Name five articles each, made of wool, of cotton, and of silk; two articles made of flax; difference between common flannels and dressed woolen goods; difference between muslin and calico; different modes of coloring fabrics; how silk, cotton, wool, and flax are prepared for wearing; what articles are made from leather, and how leather is manufactured; what articles are made of hair; what of fur; and how hair and fur are prepared for use as articles of apparel.

Fruits and Flowers.—Fruits will have found a place among articles eaten, but should be taken up again in connection with flowers, till the full process from the first opening of the

flower to the perfection of the fruit is understood. The fruits are to be treated as containing the seeds, or as the seeds themselves, that will bring forth other flowers and fruits.

In discussing flowers, the prominent parts of the flower should be shown, and their names and uses learned, such as stem, calyx, petals, stamens, pistils, pollen, and seed vessels. The enlargement of the seed-vessel, as in the apple, pear, etc., and the beautiful illustration of the use of pollen, as seen in the growth of corn, especially when different kinds of corn are planted near each other, may be made a profitable study.

Plane Figures, the Circle and its Parts.—Extending this exercise from the seventh grade, the following figures should be described: equilateral, isosceles, scalene and right angled triangles; rectangles (the square and the oblong); the rhombus and the trapezium; the circle, circumference, arc, diameter, radius, chord, segment, sector, semi-circle, and quadrant. See §§ 5. 6.

§ 45. MORALS AND MANNERS, See § 7.

§ 46. DRAWING.

In addition to straight line drawing, the curve should be introduced, and exercises should be given combining the figures thus far learned. See §§ 22, 27.

§ 47. READING.

During the time of this grade, the novelty of reading from a book having somewhat worn off, special care must be exercised lest the pupils fall into listless unintelligent reading. There is no point in the whole course where there is a better opportunity for the cultivation of good habits, and at the same time where there is greater danger of the formation of bad habits in reading. The remarks made in general directions apply with peculiar force here. See § § 1, 7, 17, 25, 41.

SPELLING, See § 2.

§ 48. NUMBERS.

The completion of the multiplication and division tables through the 12s, according to directions for seventh grade,

will still leave much time for the miscellaneous exercises assigned to this grade. These should be as extensive and as varied as the ingenuity of the teacher will admit. A few suggestive exercises are given here: What is the difference between six, times four, and ninety-six divided by eight? and others like it. Beginning at five times three, count by threes or fours or fives, as far as seven times eleven. From thirty-six divided by four, count by fives till you reach a point nearest nine times seven. An almost infinite variety of such exercises may be prepared by the teacher and assigned to the class.

Such exercises, together with those suggested under previous grades, will furnish a constant and thorough review of all the tables.

Children may also count by fives and fours alternately, as 1, 6, 10, 15, 19, etc., or by twos, threes and fours alternately, as 2, 4, 7, 11, 13, 16, 20, etc. Exercises in adding columns of single figures, may be introduced here very properly. For this purpose columns of figures may be placed upon the board, or children may prepare the columns themselves. Great pains should be taken to secure neatness and symmetry in the structure of the figures written. Pupils should be taught to add by giving the result at each step. If the following be the example:

3	}	Pointing to 1, the pupil should say, "one," and then at
4		
7		
2		
1		
-17		2 he should say "three," and at 7 he should say "ten,"
		and so on, and not after this fashion: one and two are
		three, and seven are ten, and four are fourteen, etc.

Upon the writing of the Arabic and Roman numerals no special instruction is needed. In all cases pupils should be able to find their lessons as readily by the lesson as by the page. See §§ 3, 6, 26, 43.

§ 49. ABBREVIATIONS.

These must be memorized, but whenever an opportunity occurs in a reading lesson or in any other lesson, a practical application of the abbreviations may be made with much profit.

FIFTH GRADE.

Oral Instruction.—Review of previous grades; weights and measures; rectangular and spherical solids.

Morals and Manners.

Reading and Spelling.—First half of Third Reader read and reviewed, with close attention to punctuation, definitions and illustrations; frequent exercises in enunciation; spelling, both by letters and by sounds from Speller half through dissyllabic words, and from reading lessons.

Sentence Making.—Applying rules of punctuation, with use of capitals.

Drawing.—With slate or lead pencil, using cuts from books, drawing cards and other copies.

Writing.—with ink.

Mental Arithmetic.—To where Arabic characters are introduced; exercises in reading and writing Arabic numbers to 1,000,000, and Roman numerals to 2,000; exercises in combining series of numbers.

Abbreviations.—reviewed.

Singing.

Primary Geography.—Through the United States, with map drawing.

Declamations and Recitations.

Physical Exercises.—From two to four minutes at a time, not less than four times a day.

§ 50. ORAL INSTRUCTION.

Review of Oral Course of previous grades.—This review is designed to be general, but it should be thorough. Under three different heads it may be brought up:

1. Animals; their classification, their parts, the form and structure of each of the classes, their modes of life, their weapons of warfare and of defence, their intelligence, sagacity or ferocity, their covering or clothing, their uses, the modes of their capture, and anecdotes respecting them.

2. Vegetables, including flowers, plants, shrubs and trees, grains and garden vegetables, their method of growth and their uses, the uses of their different parts, as; roots, stems, leaves, etc., etc.

3. Miscellaneous, (a,) trades, tools and materials. This review may be best conducted by selecting objects, and learning from the pupils the different materials used in their structure, the tools employed in shaping the materials, and the different tradesmen employed in their manufacture. (b,) Articles eaten, and worn; reviewed by visiting in imagination some large hotel and examining the food eaten by its guests, and the articles of dress worn by them, or taking real and

common life as seen every day by the pupils. (c,) Lines, angles and figures, reviewed in drawing lessons, or in examining the objects of the school room as to their form.

This review may be connected with Sentence Making.

Weights and Measures.—The child will here be required to estimate both weights and measures. Each school should be furnished with standards of comparison, so that the accuracy of the child's knowledge may be tested. So far as measures are concerned, the most convenient standard may be made out of a pointer, by putting brass tacks with small heads at distances of one inch, three inches, six inches, nine inches or one-quarter yard, one foot, one-half yard and one yard from the end, or small sticks of various lengths may be used. Children should be required to draw lines of different lengths and apply the measure after they have been drawn. So may lines or figures of certain lengths or surfaces be divided evenly or unevenly, always applying the test after the work has been done.

Spherical and Rectangular Solids.—These may embrace the sphere, the cylinder and the cone; the prism, the pyramid, the cube and the parallelopiped. Further than these there seems but little necessity for carrying the exercise until Geometry is studied as a science. See §§ 5, 6, 16, 24, 31, 40, 44.

§ 51. READING, See §§ 1, 46.

§ 52. SPELLING, See § 2.

§ 53. SENTENCE MAKING.

This exercise is designed as introductory to the written abstracts and reviews that are commenced in the Grammar Department, and even here it may be associated with the review of the oral course. See § 50. In § 1 the construction of sentences containing selected words is recommended. It will be proper to extend the exercise into this grade, and require written sentences. In § 8 also, upon *composition writing*, suggestions are made with reference to subjects to be written upon. These suggestions are renewed in this connection, so far as they are applicable. In brief it is not always or even generally desirable that *sentence making*

should be practiced for its own sake alone, but it may be so connected with other exercises as to save time and to secure thoroughness of scholarship. Punctuation, use of capitals and spelling should receive special attention in this exercise. See § 6.

§ 54. DRAWING.

Beside the use of drawing cards, etc., children should be taught to sketch all the solids presented in the oral course.

§ 55. WRITING.

The use of the pen is first required in this grade. The points to be attended to are, the kind of pen used, the manner of holding the same, the precautions to be taken against soiling the fingers and blotting the paper, and the cleaning of the pen after its use. Each pupil should have a small piece of paper, upon which to try the pen before writing, also a blotter to keep under the hand while writing so that the paper may not become oily by the frequent passing of the hand over it. To secure neatness and uniformity, the teacher should direct all the movements of the class in writing, requiring all to write the same words at the same time, and allowing no rambling writing. If a pupil is absent upon any day set for writing, his book will show a complete blank for that day. The teacher may or may not give him permission to make up his loss, as the circumstances attending his absence may warrant. See § 4.

§ 56. NUMBERS.

A text-book in mental arithmetic is here introduced for the first time. Its proper use will be a topic for the teacher's instruction. As the exercise is purely a mental exercise, it is not well to allow the use of a book at recitation. See § 3.

It is also designed that pupils in this grade learn enough of notation and of numeration to be able to read and write readily any numbers as far as 1,000,000. Frequent exercises should be given in this, both upon the board and upon the slate. When numbers are given for writing, a few may write upon the board, while all others write upon their slates. Columns

of figures may be placed upon the board that pupils may practice addition of numbers of two or more figures; also simple exercises in subtraction.

The Roman numerals need not be carried beyond 2,000, but the principles that underlie the arrangement of the letters used, should be taught and mastered. To test the accuracy of the child's knowledge of these principles many examples may be given even unlike those found in actual practice. See §§ 4, 26, 43, 48.

§ 57. GEOGRAPHY AND MAP DRAWING.

The facts of geography should be made attractive by many and simple illustrations. After a rain storm there may be found in the school yard miniature representations of islands, capes, bays, rivers, isthmuses, straits, peninsulas, etc., etc. The child's capacity to estimate distances should be cultivated, so that he may expand the little miniature world before him in the playground into the real world.

Map drawing should be confined to imitations of the maps before him, and credit should be given for a neat map of good proportions without reference to the scale upon which it is drawn. The scale should be determined by the size of the paper, or of the slate used. It is better, however, to enlarge than to diminish the scale of the map used as a copy, provided only that proper proportions be preserved.

In connection with this exercise let the following course be pursued in addition to what was given under the head of measures in the oral course for this grade:

1. At a given signal let every member of the class draw on the blackboard or slate a continuous straight line, of any length, and in any direction; a second; a third; a fourth; a fifth. In the same manner, let five dotted lines be drawn. At successive signals, let all the pupils place ten points on the slate or blackboard, without any reference to each other. Now let all the pupils draw a straight line between any two of these points. This exercise should be continued, at successive signals, till all the points are connected.

2. The second exercise consists in making the pupils familiar

with the smaller units of length, which may be done by the use of the common foot measure. Let the class, at a given signal, draw lines one foot in length, and teacher and pupils test the accuracy of the work by applying the standard. After successful trials, represent combinations of the standard in lines of two and three feet. Now let the pupils apply these units to space and objects in the room.

Again, let the pupils draw lines one foot in length, and divide each line into two equal parts; each of these parts into two other equal parts, continuing the division till the line has been divided into inches. Having a clear idea of the above units, assume points at the distance of an inch, a foot, two feet, and a yard, and let them be connected first by continuous lines, and afterward by dotted lines.

3. Let the pupils draw straight lines, of given lengths, in different directions, as vertical, horizontal, and oblique. These terms may be illustrated by reference to the walls and floor of the school room.

4. The class should be required to combine straight lines in the formation of triangles—right, acute and obtuse angled—quadrilaterals, and other rectilinear figures. After the first figure is drawn, other similar figures may be inscribed or circumscribed at given distances.

5. Draw curves and parallel curves of different degrees of curvature, and at different distances.

6. Around a given point, as a centre, at a distance of one inch, let a circumference be drawn. Around the same center, at the distance of two inches, a second circumference; at the distance of three inches, a third. In this manner let successive circumferences be drawn until the distance from the center to the last is twelve inches. The exercise may be varied by increasing or diminishing the distances.

7. Let the above exercise be reversed.

8. The division of straight lines into equal parts by the application of a given scale, which should be represented on the board by each pupil.

9. The representation of the axes, poles, parallels, meridians, and zones of spheres of different diameters.

FOURTH GRADE.

Oral Instruction.—Kinds and properties of matter; laws of motion; National Flag; National and State coats of arms; metals and minerals; Historical sketches (King Philip, Columbus, Cortez, Pocahontas, Washington, Franklin.)

Morals and Manners.

Primary Geography—Completed and reviewed, with map drawing.

Construction of Sentences with oral lessons in English Grammar.

Third Reader completed, with close attention to punctuation, definitions, illustrations, and to elementary sounds.

Written and Oral Spelling, with definitions from speller through dissyllables, and from reading lessons.

Drawing.

Singing.

Writing.

Mental Arithmetic, from 5th Grade half through to Tables.

State Arithmetic to fractions; exercises in combining series of numbers.

Declamations and Recitations.

Physical Exercises, from two to four minutes at a time, not less than three times a day.

§ 58. ORAL INSTRUCTION.

Kinds and Properties of Matter.—Define and illustrate the three general classes of matter; solids, liquids and gases. Define and illustrate their essential properties; extension, impenetrability, weight or gravity, and divisibility. A few other prominent properties of matter, such as elasticity, malleability, ductility, etc., should be illustrated. Inertia should be quite fully discussed and its laws thoroughly understood.

Laws of Motion.—Attention should be given mainly to the laws of falling bodies; to the effects produced on the motion of bodies acted upon by more than a single force; to the centripetal and centrifugal forces; and to the manifold cases of resultant motion found in all cases of sailing a boat, flying a kite, rowing, flying, swimming, etc., etc.

Metals and Minerals.—What is the difference between a metal and a mineral? Which are the precious metals? Which the most useful of the metals? Which the heaviest? Which is a fluid?

Object lessons on iron, zinc, tin, copper, lead, mercury, silver, gold; on steel, brass, pewter, etc.

Of mineral substances, the more common may be presented,

and object lessons given upon lime, chalk, sand, clay, coal, peat, bricks, gravel and some of the stones used by jewelers, etc.

National and State Coats of Arms.—This topic will be confined to the coats of arms of the United States and of Illinois, their form, design and meaning.

The National Flag.—Its history, design and significance.

Historical Sketches.—It is not desirable in these sketches, that all the points touched by historians be brought out. In the sketches given of individuals, let the following points be made prominent: when and where born, early advantages and how improved, early trials and how overcome, one or two anecdotes of early history that have had a marked bearing upon the life of the man, what noteworthy acts have rendered the character famous? what traits of character are worthy of our imitation? where and when did they die?

Under the head of early advantages or early trials, will come the home influences, the school privileges and the associates of the child. Such facts should be gathered as would naturally interest children, and awaken just enough curiosity to lead the child to seek for further information in the histories within his reach. The child should be made to feel that the individual, whose character he studies, had a real and a human existence; that he was like men now-a-days in many, if not all respects, and that a re-production of the same character though living in different times, and of course doing different things, is possible. There are boys living who will bear the same relation to the times in which they live, as did Columbus, Cortez, Washington or Franklin to the times in which they lived. They will not do the same things, but they may do things as important. See §§ 5, 6.

§ 59. GEOGRAPHY, WITH MAP DRAWING.

See § 57, and in extending the rules there laid down for Map Drawing, the following will be serviceable for this grade:

1. Representation of familiar surfaces, with objects on them, as the school room, play-grounds and fields.
2. Representation of mountains.
3. Representation of rivers.

4. Representation of coast lines.

All the foregoing exercises should be repeated till a high degree of accuracy and rapidity is secured. It is important that the first nine exercises should be performed simultaneously by all the members of the class.

In the progress of every successive lesson, the teacher should call in the aid of association, by naming the products and staple commodities of the several States, historical facts, remarkable curiosities, high mountains, manufactories, etc., occasionally naming each separately. Say:—this is a lumber State, this is a wheat State, cotton State, sugar, tobacco, rice, etc. Here is gold, lead, iron, etc. Then pointing, review interrogatively—what State? its capital, rivers, mountains? What productions here? What is this? This? etc.

§ 60. READING. See §§ 1, 46.

§ 61. SPELLING. See § 2.

§ 62. WRITING. See §§ 55, 4.

§ 63. MENTAL ARITHMETIC. See §§ 3, 43, 56.

§ 64. WRITTEN ARITHMETIC.

As stated in a previous section, the greatest difficulty in the path of a pupil is, to acquire facility in the application of principles learned to examples of varied form and phraseology. The teacher should therefore study to present examples in great variety of form, still involving the principle underlying the lesson. Questions should be varied in form, even though the same answer be required, until the pupil forgets formulas and lays fast hold of principles. This will require time, patience and a great deal of ingenuity on the part of the teacher. Pupils should always receive some credit for correct analysis and correct reasoning, even if the answer be wrong. It is better to have correct reasoning and a wrong answer, than correct answers with no reasoning at all. The best thing of all is, correct answers obtained by a correct process of reasoning. The process by which the result is to be obtained should be called for frequently during a recitation; and in all cases

where a new example is given, some pupil of the class should be required to give the process of solution. The thorough training of pupils in the earlier stages of study, especially in mathematics, saves much time in the future. See §§ 13, 6, 56.

THIRD GRADE.

Oral Instruction—Air, water ; respiration, circulation, digestion ; National and State Governments ; seven wonders of the world ; historical sketches (Socrates, Cæsar, Mohammed, Cromwell, Peter the Great.)

Morals and Manners.

Geography through Western States, with map drawing.

First half Fifth Reader with punctuation, definitions, illustrations and elementary sounds.

Written and Oral Spelling, with definitions from speller through trisyllables.

Writing.

Singing.

Mental Arithmetic to tables.

Grammar through pronouns, with lessons in the use of language to follow oral exercises in Grammar.

Written Arithmetic—From fractions through the book ; exercises in combining series of numbers.

Declamations and recitations.

Physical Exercises, from two to four minutes at a time, not less than three times a day.

§ 65. ORAL INSTRUCTION.

Air and Water.—Component elements of air ; of water. Proportion of oxygen and nitrogen in the air. Relation of oxygen to life ; to combustion ; most abundant of all known substances. Properties of nitrogen ; of hydrogen ; weight of hydrogen.

Four or more lessons on the common properties and uses of water. Hard and soft water ; water of the ocean, etc.

Simple experiments illustrating the pressure of the air, may be performed in the presence of the class. Fill a tumbler perfectly full of water, place over its top a piece of writing paper, larger than the top of the tumbler, and then pressing down the palm of the hand upon the paper, raise and invert the tumbler and remove the hand ; the pressure of the air upward will prevent the water from falling out. Take a quarter of a dollar or any metal of like shape, cut a piece of paper of the same size, and holding them apart from each other, drop them to the floor, the metal will fall quickest ; but place the paper exactly

upon the metal and let them drop, they will fall in the same time, the money having removed the pressure of the air from beneath the paper. A glass tube may be placed in water and the mouth applied to the upper end, by drawing in the air the water will rise, owing to the downward pressure of the air upon the water outside the tube. Take a bent tube, fill it with water, and close one end with the thumb while the effort is made to draw up the water at the other end, and the effort will prove futile until the thumb be removed. Insert an open tube in a vessel of water, and closing the upper end with the thumb remove the tube, and the water will remain in the tube.

Respiration, Circulation, and Digestion.—Very much instruction upon the laws of hygiene should be given at all times throughout the entire course. Here, as elsewhere, attention should be paid to the posture of children, to their cleanliness, to their habits of dress, of eating, and of sleeping. But in this grade special attention should be given to the organs of *Respiration, Circulation, and Digestion*; the lungs, the heart, the stomach, and the following more specific topics: mastication, the teeth, saliva, digestion, chyme, chyle, nutrition, the blood, blood-vessels, structure and office of the heart, circulation of the blood through the system, impurities, waste of the system, how repaired, proper and improper food, eating too much, too fast, too often, late in the evening, irregularity of meals, dyspepsia, alcoholic drinks.

Structure and office of the lungs, respiration, capacity of the lungs, exercises for their healthy development, obstructed action, dangerous habits of bending over desks, process of purifying the blood, different colors; carbonic acid of the breath, how formed, amount, composition of carbonic acid, weight, relation to life, experiment of a lighted candle in air that has been held in the lungs a few seconds, carbonic acid in wells, burning charcoal in a close room, carbonic acid in the stomach, soda fountains, raising bread; ventilation, inhalation of gas and its deleterious effects.

Seven Wonders of the Age.—(1) Egyptian pyramids; (2)

Mausoleum erected by Artemisia ; (3) Colossus at Rhodes ; (4) Statue of Jupiter Olympus ; (5) Pharos at Alexandria ; (6) Wall and Hanging Gardens of Babylon ; (7) Temple of Diana at Ephesus. Some brief account of each of these should be given, and a longer account of 1, 6 and 7.

National and State Governments.—The following topics should be presented : 1, the executive branch ; name, mode of election, and length of time of office. 2, the legislative branch ; the two divisions ; their names ; modes of election of members of each, and time of service of each. 3, judicial branch ; the names and relation of the different courts to each other.

Historical Sketches. See § 58.

§ 66. GEOGRAPHY AND MAP DRAWING.

In addition to instructions given upon the subject of map drawing for other and lower grades, the following suggestions are valuable :

Select a county or State having regular outlines. Select a scale with some convenient unit of measure. After determining the position of the cardinal points, draw dotted lines at right angles to each other, one representing the central meridian, the other the central parallel. Apply the scale to the meridian as many times as the distance represented by it is contained in the distance between the north and south points of the country to be drawn. Through the points of division, draw dotted lines at right angles to the meridian, which will represent parallels of latitude. Apply in like manner to the central parallel, such part of the scale as a degree of longitude is of a degree of latitude. Through the points of division draw dotted lines at right angles to the parallel. These will represent meridians. Designate the parallels and meridians by numbers expressing the position of points or places through which they pass, learned from an atlas.

The frame of the map being complete, represent by dots the prominent points of the boundary, the latitude and longitude of which have been previously learned. Having fixed in the

mind the nature and direction of the boundary line, it should be drawn wholly from memory. The boundary completed, the most prominent natural features should be represented.

The pupil now has before him a map of his own construction, in which he cannot fail to be interested.

The use of the globe should be introduced in this connection, showing the rotundity of the earth, rotation on its axis, day and night, poles, equator, parallels of latitude, meridians of longitude, tropics, polar circles, zones, points of the compass at any given place, the continents, oceans, and relative position of places, situation of the United States, of Illinois, of Chicago, and relative size of each.

Similar illustrations should be constantly given with the globe in connection with the recitations from the text-book, and no definition should be passed by till the teacher has satisfactory evidence that the pupils understand clearly the object described.

Lessons in geography should be accompanied by brief historical sketches of important events connected with the different countries, and by some allusions to ancient geography, and the changes through which the countries have passed in their governments, boundaries, etc.

One of the most common faults in teaching geography is the practice of requiring pupils to learn the names of a large number of unimportant places, the exact population of unimportant cities, etc., etc. See §§ 57, 59.

§ 67. READING, See §§ 1, 47.

§ 68. SPELLING, See § 2.

§ 69. MENTAL ARITHMETIC, See §§ 3, 48, 56.

§ 70. GRAMMAR, See §§ 6, 8, 53.

The text-book is introduced into this grade for the first time. It is not desirable that all the critical observations pertaining to the science should be studied by the pupil, at least not until a later period when the whole subject is reviewed. Practice is worth more than precept in this study. Hence

illustrative exercises of the rules given, especially in connection with the errors noticed in the everyday conversation of the children, will be of great value. Beside the words given in the grammar, many other words of common use should be declined, conjugated, or compared, until the pupil forms the habit of correct language. If the study of grammar be extended so that what is learned then, is applied to all the speaking and writing of the child, it will be less dry and more valuable. Every recitation should include the use of language.

§ 71. WRITTEN ARITHMETIC, See §§ 13, 64.

SECOND GRADE.

Oral Course.—Electricity and magnetism, sound; light; heat; historical sketches (Demosthenes, Cicero, Tell, Webster, Calhoun and Clay.)

Morals and Manners.

Grammar to rules of syntax.

Compositions, Abstracts and Written Reviews.

Geography, to Asia and reviewed.

Map Drawing from memory.

History of the United States to the Revolution.

Fifth Reader completed, with punctuation, definitions, illustrations and elementary sounds.

Written and Oral Spelling, with definitions from speller, half through polysyllabic words and from reading lessons.

Writing.

Singing.

Mental Arithmetic completed.

Slate Arithmetic, from beginning through simple interest; exercises in combining series of numbers.

Declamations and Recitations.

Physical Exercises, from two to four minutes at a time, not less than three times a day.

§ 72. ORAL INSTRUCTION.

Historical Sketches.—See § 58.

Electricity and Magnetism.—Illustrate the production of electricity, and properties of attraction and repulsion, by a rubber ruler rubbed briskly with a piece of woolen cloth. Conductors and non-conductors, lightning and lightning conductors, Franklin's kite.

Properties of the magnet. Magnetic needle, mariner's compass, horseshoe magnet, telegraph.

Upon these topics what is needed is to call the attention of the child to the phenomena of nature, and to draw the lessons from these rather than from any scientific treatise. In the matter of electricity, the flying apart of the hair when combed briskly in cold weather, the effect of water in making it smooth, the effects of strokes of lightning upon objects that the children have seen; and in magnetism the use of the magnetic tack hammer, the effect of a magnet as shown upon a little pocket compass, etc., etc., will interest and profit the pupils more than merely scientific treatises. *What is done*, is first to be learned. The *theories* regarding the methods may be neglected until the science is studied more fully.

Sound.—How produced. Illustrate by stretched cord or some other vibrating body. Action on the ear. High and low sounds—how produced. Relation of the air to sound. Velocity of sound. The human voice. Varieties of the human voice. Name twenty different kinds of sounds. Echoes; whispering gallery; ear-trumpet. Musical instruments; bells.

Light.—Luminous bodies. Velocity of light. Difference between the light of the sun and that of the moon. Laws of reflection; mirrors. Refraction; experiment with a piece of money in a bowl of water. Action of the microscope and telescope. Solar spectrum; rainbow. Structure and action of the eye. Danger of injuring the eyes from excessive use; from imprudent exposure to light; from reading in twilight; from reading fine print. Danger of allowing young children to look steadily at a light. Average distance at which a book should be held from the eye; effect of holding a book too near the eye. How cats and other animals see in the night. Cause of color. Twilight.

Heat.—In expanding the following topics, explain and apply the principles, and illustrate them as far as practicable. Sources of heat; sensations of heat and cold; burning-glasses; good and poor conductors; different kinds of clothing; double windows; ice houses; use of a fan; protection of the ground by snow. Contraction and expansion; putting tire on a wheel; fire balloons; thermometer; glass cracked by hot water; why clocks go faster in cold weather than in warm; how to regulate

a pendulum clock when it gains or loses time ; freezing water ; heat absorbed by change from solid to liquid state, and from liquid to gaseous ; freezing mixture of salt and ice ; cooling a heated room by sprinkling water on the floor. Boiling water ; how the force of steam is produced. Flame—how produced Carbon. Flame of a candle—why no combustion in the centre ; wick—why not consumed ; use of circular wick in astral and solar lamps ; use of glass chimney ; of small hole in top of lamp ; gas used in lighting buildings ; use of a blower in kindling a fire ; action of a common chimney ; proper construction ; advantages of stoves as compared with open fire-places, disadvantages.

§ 73. GRAMMAR. See §§ 6, 70.

§ 74. COMPOSITIONS. See § 8.

§ 75. ABSTRACTS AND WRITTEN REVIEWS. See § 10.

§ 76. GEOGRAPHY.

One of the best modes of reciting history, geography, etc., is by the use of topics. Thus, in geography, a pupil passes to an outline map, drawn on the blackboard, with a set of topics in his hand, as boundaries, rivers, mountains, climate, surface, soil, productions, commerce, etc., and proceeds to describe the country assigned, stating all he recollects under each topic. When his description is completed, other members of the class are called on for corrections and additions, and the teacher makes such suggestions as the case may require. This mode of reciting by topics leaves the pupils in a great degree to their own resources, secures a more thorough and systematic preparation of the lessons, and furnishes important aid in imparting that discipline of mind which is more valuable than knowledge. It will be found particularly adapted to reviews.

Map Drawing.—See §§ 57, 66, and in addition, note carefully the following illustration. The pupils are required to draw a map of Europe, the most irregular and difficult of all the grand divisions. The pupils having been carefully drilled in the application of latitude and longitude, and in the relative length of a degree of longitude in different latitudes, the fol-

lowing prominent points in the boundaries of Europe should be written by the teacher on the blackboard and copied by the pupils into a blank book for preservation, to be committed to memory in lessons of five or ten each, according to the ability of the class. Commencing at

	Lat.		Lon.
North Cape.....	71°	N.	26° E.
The Naze.....	58	"	7 "
Tornea	66	"	24 "
St. Petersburg.....	60	"	30 "
Lubeck.....	54	"	11 "
Mouth of the Elbe.....	54	"	9 "
Brest.....	48	"	4½ W.
Bayonne.....	43	"	1½ "
Ortegal.....	44	"	8 "
Straits of Gibraltar	36	"	5 "
Genoa.....	44½	"	9 E.
Cape Spartivento.	38	"	16 "
Venice	45½	"	12 "
Cape Matapan	36	"	22 "
Constantinople	41	"	29 "
Sebastopol.....	44	"	33 "
Intersection of Caucasus Mountains and			
Caspian Sea	40½	"	50 "
Northeast point of Ural Mountains....	67	"	60 "
Mouth of Ural River.....	47	"	52 "
Mouth of Volga River	46	"	48 "

The above points are deemed sufficiently accurate for practical purposes, differing from the true position less than one-half of a degree.

Teachers will increase or diminish the number of points at their discretion; but care should be taken not to burden the memory with more numbers than are really necessary to secure accuracy in the form of the map. Some teachers would have more points fixed in the map of Europe than the number here given. Very few maps require more than half as many points as the map of Europe. By making a few trials, teachers will readily ascertain how many points it is best to fix in the memory by

latitude and longitude, and how far it is best to rely upon general recollection in giving the direction of coast lines.

Suppose the first lesson be a map of the coast line from Cape North to St. Petersburg. The points essential to this exercise are Cape North, the Naze, Tornea and St. Petersburg.

The latitude and longitude of the points having been learned, recitation may be required in the following manner:

Cape North is situated 71° N., 26° E. The general direction of the coast line is southwesterly to The Naze at the south point of Norway, with many small indentations; thence northeasterly to Christiana, coast line regular; thence southeasterly to the most southern point of Sweden, very regular. The position of the remaining points and the regularity and direction of the coast line should be learned and recited in a similar manner.

The class is now prepared to draw. First each pupil draws upon the board a vertical line called the scale, representing 5° or 10° of latitude, according to the size of the map. A dotted vertical line should now be drawn representing the central meridian in Europe, the 20th degree. Supposing our scale to represent 5° of latitude, the most southerly point being about 35° , the most northerly, 70° , the difference will contain seven spaces of 5° each; hence there will be eight parallels. Now divide the meridian into seven equal parts, each equal in length to the scale assumed, and draw dotted curved lines through the points of division, representing parallels of latitude. Next draw the meridians. On the parallel of the 70th degree, a degree of longitude is nearly one-third of a degree of latitude.

The most easterly point being in longitude 60° , and the most westerly nearly 10° W., there will be eight spaces and eight meridians east of the meridian of 20° , and two spaces and two meridians west of it.

Now set off on the parallel of 70° , eight spaces equal to one-third of the scale, east of the meridian of 20° , and two on the west. A degree of longitude on the parallel of 35° is four-fifths of a degree of latitude, nearly. Now proceed to lay off the same number of spaces as before, each being four-fifths of the scale, and connect the parallels of 70° and 35° with straight

or curved dotted lines. The frame being completed, let the points learned and described be located with dots and connected with lines, in conformity with the description previously given. After the class has acquired the ability to represent with accuracy and rapidity the first lesson, another section of the boundary, together with that previously drawn, should be assigned for the next lesson. Let successive sections be assigned until the outline is completed. The teacher cannot over-estimate the value of rapid execution in map drawing, which is attainable only by frequent reviews.

The mode of representing lakes, rivers, mountains and prominent towns, will be readily suggested to the teacher.

§ 77. HISTORY.

Care should be taken that the memory of the child be not burdened with trifling and unimportant facts. The leading points should be seized upon and their relation to other leading facts be understood. The most prominent points in U. S. history should be associated with dates. In regard to others, it matters but little whether the exact date be remembered. See §§ 13, 6.

§ 78. READING.

In this grade and in the first grade, I would recommend the occasional practice of writing out the reading lesson in full and of reading the same from the manuscript. The manuscripts should also be carefully examined as to chirography, spelling, punctuation, margin and general divisions of the lesson into paragraphs. See § 1.

§ 79. SPELLING, See § 2.

§ 80. MENTAL ARITHMETIC. See § 3.

§ 81. WRITTEN ARITHMETIC.

It is well to require a simple statement of the method of performing each example assigned the student in recitation, before he takes his place at the blackboard. Facility in analysis is the first and most important point to be gained. See §§ 6, 36, 64, 13.

FIRST GRADE.

Oral Instruction.—Geology, meteorology, popular astronomy, historical sketches (Babylon, Nineveh, Herculaneum and Pompeii, Jerusalem, Athens, Carthage).

Morals and Manners.

Grammar completed, with parsing and analysis from reading book.

Compositions, Abstracts and Written Reviews.

Geography, completed and reviewed, with map drawing from memory, and use of terrestrial globe.

History of United States, completed and reviewed.

Sixth Reader, with explanations, illustrations and analysis. Analysis of derivative and compound words, and a few selected rules of spelling. Speller completed.

Writing.

Singing.

State Arithmetic, completed and reviewed. Exercises in combining series of numbers.

Mental Arithmetic reviewed, especially more difficult examples.

Declamations and Recitations.

Physical Exercises, from two to four minutes at a time, not less than three times a day.

§ 82. ORAL INSTRUCTION.

Geology.—Five or more oral lessons on the geological formation of the United States; coal fields; mineral ores; geology of Illinois; fossiliferous rocks.

Popular Astronomy.—Ten or more elementary lessons. The earth—its size and motions. Change of seasons—how caused; difference in the length of days and nights at different seasons of the year; length of the longest day at the equator; at the tropics; at the polar circles; at the poles. Tides. Solar system. The sun—its office, distance, magnitude, spots. The moon—its size, distance, telescopic appearance, different phases; eclipse of the moon, of the sun. Name the planets in their order, relative size, satellites; rings of Saturn. Morning and evening stars. Comets. Fixed stars.

Teach the pupils to point out, in a clear night, five or more conspicuous constellations; five or more stars of the first or second magnitude; all the larger planets that are above the horizon.

Meteorology.—Six or more oral lessons on winds, clouds, fogs, dew, frost, moisture settling on a vessel of cold water in a warm room, rain, snow, hail, ice.

Historical Sketches.—Their location, their present condition, their former importance, the character of their former inhabitants, and their modes of life as known from history or learned from their ruins, will furnish sufficient topics for study.

§ 83. GRAMMAR AND USE OF LANGUAGE.

At least half the time appropriated to grammar in the first grade, should be spent in parsing and analyzing select pieces from Milton, Pope, and other authors, embracing the different varieties of style. The extracts required for this purpose may be selected from the reading book.

No exercise should be regarded as complete and satisfactory that does not analyze the thought as well as the language of the writer.

Pupils of this grade should receive special instruction in letter writing, including the form and manner of beginning and ending, with the date; paragraphs; dividing between syllables at the end of the line; margin; folding; superscription; sealing, etc. See also, §§ 6, 53, 70.

§ 84. USE OF GLOBES.

Pupils should receive so much instruction in the use of the terrestrial globe, that they will be able to solve by it, before the class, not less than five common problems; as, to find the length of a degree of longitude at any given latitude; to find the hours of sunrise and sunset, and the length of day and night at a given place on a given day; to find how long the sun shines without setting, at any given place in the north frigid zone, and how long it is invisible, etc.

§ 85. HISTORY.

Particular attention should be paid to the history connected with the important points studied in geography. The places and what has happened there should be closely associated. See § 77.

§ 86. READING, See §§ 1, 78.

§ 87. SPELLING.

Special attention should be given to the analysis of derivative and of compound words, with the meaning and use of the more common prefixes and suffixes. A few rules of spelling should be taught and their application illustrated by familiar examples. See § 2.

§ 88. WRITTEN ARITHMETIC.

The review should be thorough as far as principles are concerned. See §§ 13, 81.

§ 89. WRITING, See §§ 23, 55.

HIGH SCHOOL-SYNOPSIS OF THE CLASSICAL COURSE.

YEARS.	FIRST TERM.	SECOND TERM.	THIRD TERM.
I.	Algebra. Harkness' First Latin Book. Physical Geography.	Algebra. Harkness' First Latin Book. Physiology.	Algebra Reviewed. Latin Reader. Physical Geography Reviewed. Physiology Reviewed.
II.	Geometry. Latin Reader. Universal History.	Geometry. Cæsar. Universal History. Greek Reader.	Geometry Reviewed. Cæsar. Universal History. Greek Reader.
III.	Greek Reader. Cicero. Natural Philosophy.	Greek Reader. Cicero. English Literature.	Greek—Anabasis. Cicero Reviewed. Natural Philosophy Reviewed. English Literature Reviewed.
IV.	Greek—Anabasis. Virgil—Eclogues. Latin Prose.	Greek. Virgil—Æneid and Georgics. Latin Prose.	Review of Latin and Greek.

Reading, during the first and second years. Drawing, during the second, third and fourth years. Composition and Declamation, during the entire course. Classical Antiquities, Military Affairs, during the second year. Classical Antiquities, Civil Affairs, during the third year. Classical Antiquities, Mythology, during the fourth year. Ancient Geography, in connection with the History and Literature of Greece and Rome. Physical Exercises through the course.

OPTION IN THE COURSE.

Pupils in the General Department are required to choose between German and Latin at the commencement of the course, and continue the same language without change for two years.

At the beginning of the third year, pupils in the General Department are allowed to continue their Latin or German, or take French instead for the remainder of the course. Thus no pupil in the General Department studies more than one foreign language at the same time, and all are permitted to take two foreign languages at some time in the course.

Pupils that elect to take Latin during the first and second years, can defer their choice between the Classical and General Course till the opening of the third year.

HIGH SCHOOL.-NORMAL DEPARTMENT.

OUTLINE OF THE COURSE.

YEARS.	FIRST TERM.	SECOND TERM.	THIRD TERM.
I.	<p>Arithmetic. Algebra. Political Geography and Map Drawing. Geometry.</p>	<p>Grammar. Algebra. Geography and Map Drawing. Geometry.</p>	<p>Physical Geography. Outlines of General History. Botany.</p>
II.	<p>Natural Philosophy. Physiology. Book-keeping, half term. Rhetoric. Constitution U. S., and Principles of Government.</p>	<p>Natural Philosophy. Chemistry. Mental Philosophy.</p>	<p>Arithmetic, half term. Geography. Grammar. Astronomy.</p>

Reading, through the entire course. Composition, through the entire course. Practice of Teaching, through the entire course. Singing, through the entire course—one lesson per week. Drawing, through last four terms—two lessons per week. Theory of Teaching, last two terms. Physical Exercises, through the course.

TEXT BOOKS USED IN THE HIGH SCHOOL.

GENERAL DEPARTMENT.

1. Preparatory Studies reviewed, using the text books authorized in the District Schools.
2. Warren's Physical Geography.
3. Weber's Universal History.
4. Ancient Geography, in connection with History.
5. Ray's Higher Arithmetic.
6. Ray's Algebra.
7. Davies' Legendre.
8. Plane and Spherical Trigonometry.
9. Mensuration.
10. Gillespie's Surveying.
11. Navigation.
12. Hanaford & Payson's Elementary Book-keeping.
13. Gray's Botany.
14. Robinson's Elementary Astronomy.
15. Cutter's Physiology.
16. D. A. Wells' Natural Philosophy.
17. D. A. Wells' Chemistry.
18. Geology (Hitchcock's) and Mineralogy.
19. Quackenbos' Rhetoric.
20. Wayland's Political Economy.
21. Shurtliff's Governmental Instructor, and Constitution of the United States.
22. Haven's Mental Philosophy.
23. Etymology.
24. Cleveland's English Literature.
25. Hillard's Sixth Reader.
26. Drawing.
27. Vocal Music; using the Coronet.
28. Woodbury's German Series.
29. Schiller's William Tell, and Schiller's Maria Stuart.
30. Fasquelle's French Course.
31. Chapsal's Literature Francaise.

CLASSICAL DEPARTMENT.

Nos. 1, 2, 3, 4, 5, 6, 7, 15, 16, 24, 25, 26, 27.

Andrews' and Zumpt's Latin Grammars.

Harkness Arnold's First Latin Book.

Andrews' Latin Reader.

Arnold's Latin Prose Composition.

Andrews' Cæsar.

Johnson's Cicero.

Bowen's Virgil.

Andrews' Latin Lexicon.

Anthon's Classical Dictionary.

Crosby's Greek Grammar.

Crosby's Greek Lessons.

Arnold's Greek Prose Composition.

Felton's Greek Reader.

Boise's Xenophon's Anabasis.

Owen's Homer's Iliad.

Liddell & Scott's Greek Lexicon.

TEXT BOOKS USED IN THE DISTRICT SCHOOLS.

Hillard's Fifth and Sixth Readers.

Parker & Watson's First, Second and Third Readers.

Parker & Watson's Elementary Speller and Pictorial
Primer.

Edwards' Outlines of English History.

Charles A. Goodrich's History of the United States.

Kerl's Grammar.

Warren's Common School Geography.

Mitchell's Primary Geography.

Robinson's Practical Progressive Arithmetic.

Colburn's Intellectual Arithmetic.

Emerson's First Part.

Payson, Dunton & Scribner's Writing Books.

Webb's Charts.

Philbrick's Primary School Tablets.

Webster's Primary Dictionary.

Merry Chimes and Song Bird, No. 2.

Movable Cards with Words and Letters for the use of the Tenth Grade.

Dictionaries.—Webster's and Worcester's Quarto Dictionaries shall be used as authority in Definitions, and Webster's Dictionary as authority in Orthography and Punctuation; but the orthography of any scholar, in exercises of composition, shall not be deemed incorrect if in accordance with either Webster or Worcester.

TEXT BOOKS USED IN EACH OF THE GRADES OF THE DISTRICT SCHOOLS.

TENTH GRADE.

Webb's Cards, Nos. 1, 2, 3, 4 and 6.

Philbrick's Primary School Tablets, Nos. 1, 2, 3, 4 and 9.

See page 26.

NINTH GRADE.

Webb's Cards, reviewed.

Philbrick's Tablets, Nos. 15 and 16.

Parker & Watson's Primer, completed and reviewed.

Emerson's First Part, through 4+10.

See page 31.

EIGHTH GRADE.

Parker & Watson's First Reader, completed.

Emerson's First Part in Arithmetic, through Addition and Subtraction to page 27.

Song Bird, No. 2.

See page 35.

SEVENTH GRADE.

Parker & Watson's Second Reader, to page 119.

National Elementary Speller, to page 40.

Emerson's First Part, from page 27 to page 32.

Song Bird, No. 2.

Writing—Philbrick's Tablets, Nos. 3 and 4; and Payson, Dunton & Scribner's Charts.

See page 37.

SIXTH GRADE.

Parker & Watson's Second Reader, from page 119 through.

National Elementary Speller, from page 40 to page 53.

Writing—Payson, Dunton & Scribner's Charts.

Emerson's First Part, from page 32, through.

Abbreviations—pages 154 and 155 of Speller, and Multiplication Table through 12×12 , and review.

Song Bird, No. 2.

See page 40.

FIFTH GRADE.

Parker & Watson's Third Reader, from page 39 to page 163, section 14; also, sub-sections 1, 2, 3, 4, 5, 6, 7, 8, 9 of the Introduction, Part 1 to page 25.

National Elementary Speller, page 53 to page 70.

Writing—Payson, Dunton & Scribner's Charts, and Writing Book, No. 1, or 2, or 3.

Colburn's First Lessons, to page 56.

Mitchell's Primary Geography, to page 53.

Abbreviations—Speller, page 156, and review pages 154 and 155.

Merry Chimes.

See page 44.

FOURTH GRADE.

Parker & Watson's Third Reader, from page 163, section 14, through the book ; also, rest of Introduction from page 25 through.

National Elementary Speller, from page 70 to page 85.

Payson, Dunton & Scribner's Writing.

Colburn's First Lessons, from page 56 to page 94, section 9.

Robinson's Rudiments of Written Arithmetic, to page 74.

Mitchell's Primary Geography, from page 53 through.

Merry Chimes.

See page 49.

THIRD GRADE.

Hillard's Fifth Reader, from page 61 to page 219, lesson 60 ; also one-half of Part 1.

National Elementary Speller, from page 85 to page 117.

Payson, Dunton & Scribner's Writing.

Colburn's First Lessons, from section 9, page 94 to Tables page 128.

Robinson's Rudiments of Written Arithmetic, from page 74 through the book.

Kerl's Grammar, Part I and Part II to page 105, omitting fine print.

Warren's Geography, to page 46.

Merry Chimes.

See page 52.

SECOND GRADE.

Hillard's Fifth Reader, completed.

National Elementary Speller, from page 117 to page 131,
Miscellaneous Exercises.

Payson, Dunton & Scribner's Writing.

Colburn's First Lessons, completed from page 128.

Robinson's Practical Arithmetic, from beginning to page
231, (mainly review, see 3d grade).

Warren's Geography, from page 46 to page 76.

Kerl's Grammar, from page 105 to page 190.

Goodrich's History United States, to page 145.

Merry Chimes.

See page 56.

FIRST GRADE.

Hillard's Sixth Reader.

National Elementary Speller, completed and reviewed.

Payson, Dunton & Scribner's Writing.

Colburn's First Lessons, reviewed.

Robinson's Practical Arithmetic, completed and reviewed.

Warren's Geography, completed and reviewed.

Kerl's Grammar, completed and reviewed.

Goodrich's History United States, completed and reviewed.

Merry Chimes.

See page 62.

REFERENCE BOOKS.

The following Books are recommended to teachers for their careful study :

- Page's Theory and Practice of Teaching.
- My Schools and School Masters, by Hugh Miller.
- Welch's Object Lessons.
- Calkins' Object Lessons.
- Barnard's Object Teaching.
- Sheldon's Object Lessons.
- Mayo's Lessons on Objects.
- Northend's Teacher and Parent.
- Fireside Philosophy.
- Youmans' Household Science.
- Herbert Spencer's Works.
- Holbrook's Normal Methods.
- Barnard's American Journal of Education.
- History and Progress of Education.
- Willson's Manual of Instruction.
- Walton's Tablets and Key.
- Northend's Teacher and Assistant.
- Hazen's Professions and Trades.
- Wells' Science of Common Things.
- Manual of Elementary Instruction.
- Model Lessons on Objects.
- Reason Why.
- Wickersham's School Economy.

These books can be found in the Teachers' Reference Library at the office of the Board of Education, and may be consulted there.



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